

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
SHERMAN DIVISION**

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U.S. DISTRICT COURT  
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TEXAS-EASTERN

BY *Jim Scott*

ALCATEL USA, INC.

Plaintiff,

v.

CISCO SYSTEMS, INC.

Defendant.

Civil Action No. 4:00CV199

**COMPLAINT**

Plaintiff Alcatel USA, Inc., by and through the undersigned attorneys, hereby files this Complaint requesting damages, injunctive relief, and declaratory relief, upon personal knowledge as to its own acts and circumstances, and upon information and belief as to the acts and circumstances of others, as follows:

**THE PARTIES**

1. Alcatel USA, Inc. is a Delaware corporation authorized to do business in the State of Texas with its principal place of business at 1000 Coit Road, Plano, Collin County, Texas, 75075. Alcatel USA, Inc. and its subsidiaries ("Alcatel") are engaged in the engineering, manufacture, and sale of numerous products and services for use in the domestic and international telecommunications industry.

2. Defendant Cisco Systems, Inc. ("Cisco") is a California corporation with its principal place of business at 170 West Tasman Drive, San Jose, California 95134. Cisco is a competitor of Alcatel, also engaged in the engineering, manufacture, and sale of products and services for the telecommunications industry.

3. This lawsuit arises out of business done and acts of patent and copyright infringement and torts committed by Cisco and a company it recently acquired, Monterey Networks, Inc. ("Monterey"), a corporation that was incorporated under the laws of the state of Delaware with its principal offices at 2280 Campbell Creek Blvd., Richardson, Dallas County, Texas 75081.

4. In August 1999, Cisco agreed to acquire all outstanding shares, options, and warrants of Monterey that Cisco did not already own. Cisco completed its acquisition of Monterey in September 1999, at which time Monterey was merged into Cisco, and Monterey ceased to exist as a legal entity. Cisco is now the operating entity of what previously was Monterey, and it has continued doing the same business and committing the same wrongs committed by Monterey. As the surviving corporation to the merger, Cisco is the successor of Monterey and has thus assumed all liabilities for the wrongs committed by Monterey out of which this lawsuit arises. References hereafter to the acts of Cisco include references to the acts of its predecessor Monterey.

#### **JURISDICTION AND VENUE**

5. This is an action for patent infringement arising under the Patent Laws of the United States, 35 U.S.C. §§ 271, *et seq.*, for copyright infringement arising under the Copyright Act of 1976, 17 U.S.C. §§ 101, *et. seq.*, and for misappropriation, misappropriation of trade secrets, theft of trade secrets under the Texas Theft Liability Act, Texas Civil Practice and Remedies Code § 134.001, *et. seq.*, tortious interference with contractual relations, and constructive trust under Texas common law.

6. This Court has subject matter jurisdiction over Counts One and Two of this action pursuant to 28 U.S.C. §§ 1331 and 1338.

7. This Court has subject matter jurisdiction over Counts Three through Seven of this action pursuant to 28 U.S.C. § 1338, and by its supplemental jurisdiction under 28 U.S.C. § 1367.

This Court also has subject matter jurisdiction over Counts Three through Seven of this action pursuant to 28 U.S.C. § 1332 because this civil action is between citizens of different states. The amount in controversy exceeds \$75,000.00, exclusive of interest and costs.

8. Cisco is doing business in the State of Texas and maintains an office in this district at 18581 North Dallas Parkway, Suite 100, Dallas, Collin County, Texas 75787. This Court therefore has personal jurisdiction over the Defendant and venue is proper under 28 U.S.C. §§ 1391(b), (c), and 1400. Cisco may be served with process in this action by serving its registered agent for service of process, CT Corporation System, 811 Dallas Avenue, Houston, Texas 77002.

### **INTRODUCTION**

9. Alcatel brings this action to redress the infringement of Alcatel's patent rights and copyrights, as well as Cisco's systematic misappropriation of confidential, proprietary and trade secret technical information regarding cutting edge Alcatel technology.

10. Alcatel is the owner of all right, title, and interest in and to U.S. Patent No. 5,455,959 entitled "System For Collecting From Masters Information Independently Collected From Associated Slaves in Shelves of a Telecommunications Terminal" ("the '959 Patent"). A copy of the '959 Patent is attached hereto as Exhibit A. Alcatel markets and sells its own products which are covered by the claims of the '959 Patent, including optical cross-connects, such as Alcatel's 1680 Optical Gateway Cross-Connect.

11. Cisco has willfully infringed the '959 Patent by making, using, offering to sell, or selling within the United States an optical cross-connect product. The product was known as the "20000 Series Wavelength Router" before Cisco acquired Monterey, and was then renamed "Cisco ONS 15900 Series Wavelength Router" (the "Wavelength Router"). Cisco is continuing to willfully

infringe the '959 Patent by making, using, offering to sell, or selling the Wavelength Router in the United States.

12. In addition to owning the '959 Patent, Alcatel is the owner of all right, title, and interest in and to the copyrights in the computer programs "Whip" and "WhipSource," both of which are software tools used to develop and maintain software source code, as well as certain "make" files, which are an automated method for translating human readable source code into a finished working program. Whip, WhipSource and the "make" files contain a substantial amount of material wholly original with Alcatel and are copyrightable subject matter under the laws of the United States.

13. Alcatel has complied in all respects with the Copyright Act of 1976, 17 U.S.C. § 101 *et seq.*, and all other laws governing copyright, and has obtained Certificates of Registration for Whip, Whip Source, and its "make" files. True and correct copies of these registration certificates and supplements thereto are attached hereto as Exhibit B.

14. Cisco has knowingly and willfully infringed Alcatel's copyrights in Whip, WhipSource, and certain of Alcatel's "make" files by copying them and using them to prepare programs for the Wavelength Router that are substantially similar to or derived from Whip, WhipSource, and certain of Alcatel's "make" files.

15. Alcatel also possesses valuable trade secrets that are related to its Whip, WhipSource and "make" file programs. By copying Alcatel's Whip and WhipSource programs, and using them to write programs to develop and maintain software for the Wavelength Router, and by copying certain of Alcatel's "make" files and using those Alcatel "make" files to develop its own "make" files, Cisco has also misappropriated Alcatel trade secrets. By misappropriating the trade secrets related to these programs, Cisco has avoided spending the time and incurring the substantial research

and development costs that Alcatel incurred developing and improving Whip, WhipSource, and the “make” files.

16. Alcatel also owns other valuable trade secrets and confidential and proprietary information concerning its own optical cross-connect products and technology, including its 1680 Optical Gateway Cross-Connect and its 1680 Optical Layer Cross-Connect. Alcatel also owns valuable trade secrets and confidential and proprietary information concerning other telecommunications products and technology which have been incorporated in its optical cross-connect products.

17. As explained more fully below, before Cisco acquired Monterey, Monterey systematically raided Alcatel of more than thirty of its key personnel. Those former Alcatel personnel brought to Cisco Alcatel trade secrets useful in developing optical cross-connect products, and Cisco has employed those trade secrets in the development and marketing of the Wavelength Router. This has enabled Cisco to develop the Wavelength Router in a fraction of the time it would have taken without the benefit of Alcatel’s trade secrets.

### **FACT BACKGROUND**

#### **A. Alcatel’s Products and Technology**

18. Alcatel is a leading designer, developer, and marketer of highly sophisticated telecommunications equipment and services. Among other products and services, Alcatel designs, develops and markets cross-connects, including optical cross-connects. Alcatel also designs and develops other products, not themselves cross-connects, that use technology that has been included in existing cross-connects and may be included in future Alcatel cross-connects. Each year, Alcatel invests substantial financial and personnel resources in research and development for its optical cross-connect technology, and in developing strategic plans for its current and future products.

19. A "cross-connect" is a system that connects signals in multiple telecommunication input lines to multiple telecommunication output lines. Cross-connects are used to route or switch signals from input lines to output lines in an optimal manner that makes efficient use of a telecommunications transmission network. Cross-connects are also used to reroute signals through the telecommunications network in the event of a network failure. An "optical cross connect" is a cross-connect that works with input and output optical signals on fiber-optic cables.

20. In 1995, Alcatel began developing its 1680 Optical Gateway Cross-Connect ("OGX") product. OGX is a cross-connect system that is used to manage information carried on fiber optic telecommunications networks. Alcatel completed the first release of OGX in 1999.

21. OGX is comprised of computer software and telecommunications hardware that performs the actual routing or switching of signals. OGX uses two broadly-defined types of computer software: administrative software, which among other things controls, monitors, and determines how to make connections between input and output signals in the network; and operational software, which actually carries out the connections determined by the administrative software.

22. The administrative software, also sometimes called Level One software, is the most complex and critical component of OGX. This software functions in essence as the brain of the OGX by making routing decisions executed by the OGX hardware and operational software. Alcatel's administrative software includes, among other things, an interface between the cross-connect and the telecommunications network in which the cross-connect is deployed, an element management system, and hardware interfaces. Among the functions the administrative software performs are keeping an inventory of the hardware that is present in the cross-connect, tracking the status of that hardware, and locating faults within the cross-connect software and hardware.

23. Alcatel invested substantial financial and personnel resources in research and development of its OGX cross-connect product, and specifically in developing its own proprietary administrative software. One important feature of the OGX administrative software is that it was made specifically to be usable in subsequent generations of cross-connect products without substantial modification. The administrative software alone is the result of a research and development investment by Alcatel costing well in excess of \$10,000,000.

24. In 1998, in response to increased demand for telecommunications network usage, Alcatel began developing its next generation optical cross-connect product, the 1680 Optical Layer Cross-Connect ("OLX"). OLX is designed to manage telecommunications information running at faster speeds more efficiently and cost-effectively than OGX. Although OLX does not use all of the same hardware that OGX uses, OLX does use substantially the same administrative software that OGX uses.

25. Alcatel markets OGX — and will be marketing OLX — to long distance telephone carriers with large telecommunications networks, such as AT&T and MCI. Alcatel has received substantial orders for OGX from AT&T, MCI, Level 3, Bell Canada, and SBC Telecommunications.

26. Alcatel is also engaged in research and development with regard to other cross-connects, as well as other products, including its Lightwave products, which involve proprietary technology that has been used in cross-connects and could be used in future cross-connects. For example, it is contemplated that the OLX will use network restoration technology taken from Alcatel's Lightwave products.

**B. Monterey's Formation and Target Product**

27. Monterey was founded in July 1997 to develop an optical cross-connect product — the Wavelength Router. Like Alcatel's OGX and OLX, the Wavelength Router is an optical

cross-connect which connects multiple input lines to multiple output lines. The Wavelength Router comes with two other items: the Cisco Wavelength Router Manager, which is an element management system that was known as Monterey's ReyView Element Management System before Cisco acquired Monterey; and the Cisco Optical Network Planner, which is a network modeling and simulation tool that was known as Monterey's ReyMaster before the acquisition. References hereafter to the "Wavelength Router" include the Cisco Wavelength Router Manager and the Cisco Optical Network Planner.

28. The Wavelength Router directly competes with Alcatel's 1680 OLX cross-connect product. Indeed, both Monterey (before it was acquired by Cisco) and Alcatel submitted proposals and made offers to sell their respective optical cross-connect products in response to a request for proposals made by AT&T for such products.

**C. Cisco's Infringement of Alcatel's '959 Patent and Copyrights and Its Misappropriation of Alcatel's Trade Secrets**

29. Before it was acquired by Cisco, Monterey, originally based in California, relocated to Richardson, Texas in order to take advantage of its large number of telecommunications companies from which Monterey could hire experienced engineers. Monterey's President and CEO, Joe Bass — the former Vice President and General Manager of Optical Networks for Alcatel — explained to the Dallas Morning News, "They drove in on Central and, lo and behold, they saw Nortel and Alcatel and Ericsson in Richardson and said, 'This is the place to be if we're going to be a start-up telecom company.'"

30. After Monterey relocated to Richardson, it hired numerous personnel from Alcatel's Optical Networks group as well as several senior Alcatel managers. Monterey systematically targeted key Alcatel personnel who have intimate knowledge of those Alcatel trade secrets that Monterey wished to use in its product. Monterey's raiding of Alcatel resulted in more than thirty



key defections of Alcatel personnel who had knowledge of highly confidential, proprietary and trade secret technical information regarding Alcatel's products. Indeed, by the Summer of 1999 approximately fifty percent of all Monterey software engineers were former Alcatel personnel. The Alcatel personnel Monterey has recruited who have knowledge of Alcatel's proprietary technology that Monterey has used include application specific integrated circuit designers, software architects, software programmers, and technical marketing specialists, including key designers of the administrative software for Alcatel's optical cross-connect products. Descriptions of personnel Monterey has raided and the Alcatel trade secrets that Monterey and Cisco have misappropriated follow, and are provided only as examples of the personnel Monterey has raided and the trade secrets Monterey and Cisco have misappropriated.

31. Marian Trnkus ("Trnkus") was the chief architect and lead designer of the administrative software for the OGX cross-connect. Trnkus was employed by Alcatel (originally through its predecessor in interest, Rockwell International) from April 1989 through May 1993. From January 5, 1994, until he joined Monterey in July 1998, Trnkus worked for Alcatel in substance as an employee and in form as a contractor. At all times during his work for Alcatel, Trnkus was subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary or trade secret information of Alcatel to any third party at any time.

32. In 1995, Alcatel assigned Trnkus to develop a new architecture for the administrative software for a cross-connect. The administrative software architecture that Trnkus, working with other Alcatel personnel, developed for Alcatel was used in a cross-connect that ultimately became known as the OGX.

33. Alcatel's OGX administrative software architecture is valuable and not generally known to, nor readily ascertainable through proper means by, third parties such as Cisco.

34. Alcatel's OGX administrative software architecture also provides Alcatel with a competitive advantage over those who do not know or use it. Through the expenditure of substantial time and resources, Alcatel was able to determine that certain software architectural design decisions worked well together to produce a successful product. Knowing that a particular combination of software design decisions have been proven to work together is extremely valuable.

35. Over the course of his work for Alcatel, Trnkus also was intimately involved in designing the administrative software used in Alcatel's optical cross-connects, as well as the applications and the features to be incorporated into these products. Trnkus is also familiar with approaches to various aspects of this software that Alcatel through the expenditure of funds and manpower determined are not workable. In addition, Trnkus possesses proprietary information concerning product features which Alcatel elected not to incorporate or to delay incorporating into these products and the various technical or market reasons behind such decisions. Trnkus also did substantial work on implementing the interface between a cross-connect and the user's network management system and has knowledge of Alcatel's proprietary knowledge in this area as well.

36. As part of carrying out his assignment to develop the primary architecture of what became Alcatel's proprietary OGX administrative software, Trnkus developed software programs known internally at Alcatel as "Whip" and "WhipSource." Whip and WhipSource were software tools designed to solve specific problems in developing and implementing cross-connect software architecture.

37. In addition to owning copyrights in Whip and WhipSource, Alcatel also possesses trade secrets related to Whip and WhipSource. The concepts underlying the use of the Whip and WhipSource tools to develop and maintain its administrative software and, separately, the source code written to implement those concepts, were both accomplished through investments by Alcatel,

are not generally known to, nor readily ascertainable through proper means by, third parties such as Cisco, and are Alcatel trade secrets.

38. Both the Whip and WhipSource concept and implementation provide Alcatel with a competitive advantage over those who do not know or use them. Alcatel invested a year testing the Whip and WhipSource concept and implementation with prototypes of the administrative software architecture, and spent several months evaluating alternatives, only to conclude that the alternatives were inferior. The Whip and WhipSource concept and implementation became integral to the successful development and maintenance of the software code for Alcatel's OGX administrative software. The Whip and WhipSource concept and implementation are also being used to develop Alcatel's OLX administrative software. Among other advantages, the Whip and WhipSource concept and implementation enable Alcatel to develop software code faster with fewer errors and to better maintain and more easily modify already-developed software code, which constitutes the vast majority of any programming effort. The Whip and WhipSource concept and implementation facilitate the writing of software that has fewer levels of subclasses and thus performs better and faster than software that has more subclasses, takes up more space, and thus performs more slowly.

39. While at Alcatel, Trnkus also wrote software source code for the OGX project. Among other software code, Trnkus wrote certain "make" files for the OGX software. "Make" files are an automated method for translating the human readable source code of the OGX software into a finished working program. They are called "make" files because they work with publicly available software called "Make."

40. In addition to owning copyrights in its "make" files, Alcatel also possesses trade secrets related to its "make" files. Alcatel's "make" files are valuable and not generally known to,

nor readily ascertainable through proper means by, third parties such as Cisco. Alcatel's "make" files, along with its OGX source code, Whip, and WhipSource, were stored in Alcatel's password-protected network.

41. Alcatel's "make" files also provide Alcatel with a competitive advantage over those who do not know or use them. It would take an estimated four to six weeks to design, code, and test such programs.

42. Cisco specifically hired Trnkus to work on the development of a software architecture for the Wavelength Router and to select software tools for its development. Soon after Trnkus's arrival at Cisco, Cisco began to infringe Alcatel copyrights and misappropriate Alcatel trade secrets.

43. Initially, the Wavelength Router software architecture was developed by Cisco employees without the benefit of any input from Trnkus. After Trnkus began working on the software architecture, however, he used Alcatel's OGX administrative software architecture in developing the Wavelength Router software architecture and incorporated the principal design features of that architecture into the design of the architecture of the Wavelength Router. Cisco thereby misappropriated Alcatel trade secrets concerning its software architecture.

44. Among the functions a cross-connect must perform are the functions of collecting an inventory of the hardware that is present in the cross-connect and collecting information regarding the functioning of the hardware. Included among the features of Alcatel's proprietary, confidential, and trade secret administrative software architecture misappropriated by Cisco is Alcatel's implementation and use of polling to collect such information. Alcatel's implementation of the polling function in its OGX administrative software architecture is used in the Wavelength Router.

45. Alcatel's '959 Patent discloses an invention relating to communications systems and, more particularly, to collecting inventory information and status information in a

telecommunications terminal, such as a cross-connect. Alcatel's OGX administrative software uses this invention as disclosed in the '959 Patent. The Wavelength Router infringes the '959 Patent by using that same invention as claimed in the '959 Patent.

46. Cisco, through the actions of Trnkus, also has infringed Alcatel copyrights in, and misappropriated Alcatel trade secrets concerning, Whip, WhipSource, and certain of Alcatel's "make" file programs. Soon after arriving at Cisco, Trnkus copied Alcatel's Whip program, made minor changes, and called the resulting copy "Genpat." He also copied Alcatel's WhipSource program for Cisco, made minor changes, and called the resulting copy "Deppat." Finally, Trnkus copied Alcatel's copyrighted "make" files. Cisco subsequently used Genpat and Deppat to develop and maintain software source code for the Wavelength Router and used the copied "make" files to develop "make" files for its own Wavelength Router software.

47. During his tenure at Alcatel, Trnkus also oversaw the two separate design teams writing Alcatel's OGX administrative software — the Facility Team and the Equipment Team. Trnkus, and other former Alcatel personnel, thus had knowledge of the specific Alcatel employees who were most knowledgeable about various aspects of the design and architecture of Alcatel's core administrative software for its optical cross-connects, as well as of other Alcatel technologies useful in cross-connects, which information also is confidential, proprietary and a trade secret of Alcatel. Trnkus, and other former Alcatel personnel, used this confidential, proprietary, and trade secret information to assist Cisco, along with other former Alcatel personnel, in further raiding Alcatel personnel.

48. In October 1999, after Alcatel made known to Cisco its claims of trade secret misappropriation, Cisco discharged Trnkus. Cisco, however, did not then stop its unauthorized use of Alcatel's computer programs and other trade secrets and proprietary technology.

**D. Cisco's Raiding of the Remainder of Alcatel's Administrative Software Design Team**

49. In addition to Trnkus, Cisco also hired away from Alcatel Ronald Russell ("Russell"), Soudabeh Beheshti ("Beheshti"), Joseph Calaza ("Calaza"), Andra Humes ("Humes"), Yun Lu ("Lu"), and John Borders ("Borders"), the design team leaders and key team members responsible for the design of Alcatel's core software for its optical cross-connect products. Cisco targeted these engineers because of their particular expertise in and knowledge of Alcatel's proprietary, confidential and trade secret information in its software to thereby gain a competitive advantage for Cisco's optical cross-connect product.

50. Russell was also one of Alcatel's lead designers of the core administrative software for Alcatel's 1680 OGX cross-connect. Russell was employed by Alcatel (originally through its predecessor in interest, Rockwell International) from June 1989 through August 1998, when he resigned his employment to work for Cisco.

51. Beheshti was a key member of the Facility Team working on the administrative software. Beheshti was employed by Alcatel from November 7, 1994 through March 11, 1999, when she resigned her employment to work for Cisco.

52. Calaza resigned from Alcatel on August 20, 1999, to join Cisco. While at Alcatel, Calaza was a leader of the Equipment Team working on the administrative software. His responsibilities included, among other things, supervising members of that team in designing and implementing the administrative software.

53. Humes resigned from Alcatel on August 20, 1999, to join Cisco. While at Alcatel, Humes was a leader of the Facility Team working on the administrative software used in both the OGX and OLX products.

54. Lu resigned from Alcatel on August 26, 1999, to join Cisco. While at Alcatel, Lu was an expert member of the Facility Team working on the administrative software. Lu's responsibilities included, among other things, supervising members of that team in designing and implementing the administrative software.

55. Borders resigned from Alcatel on August 26, 1999, to join Cisco. While at Alcatel, Borders was a leader of the Facility Team. Borders's responsibilities included, among other things, supervising members of that team in designing and implementing the administrative software.

56. Allan Collins ("Collins") was employed by Alcatel until August 24, 1999, when he resigned to join Cisco. While at Alcatel, Collins was a software architect for platform applications who also worked on OGX.

57. At all times during the course of their employment with Alcatel, Russell, Beheshti, Borders, Calaza, Collins, Humes, and Lu were each subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary or trade secret information of Alcatel to any third party at any time.

58. Russell, Beheshti, Borders, Calaza, Collins, Humes, and Lu each possess confidential, trade secret and highly proprietary information concerning the technical development, architecture and functionality of Alcatel's optical cross-connect products, specifically including the 1680 OGX and 1680 OLX, and the software used to operate them. Over the course of their employment with Alcatel, they were intimately involved in designing the administrative software used in Alcatel's optical cross-connects, as well as the applications and the features to be incorporated into these products. They are also familiar with approaches to various aspects of this software that Alcatel through the expenditure of funds and manpower has determined are not workable. In addition, they possess proprietary information concerning product features which Alcatel elected not to incorporate

or to delay incorporating into these products and the various technical or market reasons behind such decisions.

59. One of the most difficult technical problems in developing a cross-connect involves the communications between the cross-connect and the user's network management system. The "user" is the network operator who buys the cross-connect. Each user's network management system requires the receipt of an enormous amount of data from the cross-connect concerning its performance, the traffic it is carrying, and any problems that may be developing. The user's network management system also relays messages and commands to the cross-connect. This communication between the cross-connect and the user's network management system is referred to as "the user interface." The user interface can differ from network to network, and in particular AT&T has requirements for the user interface that differ from those of all other major network operators in the United States. Alcatel has devoted substantial resources to research and development concerning the user interface and possesses important trade secret and proprietary information concerning it, and in particular concerning how to implement the user interface in conformance with AT&T's requirements. Alcatel's OGX operates successfully in AT&T's network and successfully interfaces with AT&T's network management system.

60. Russell, Beheshti, Borders, Calaza, Collins, Humes and Lu, as well as Trnkus, also possess Alcatel trade secret information concerning implementation of the interface between a cross-connect and a user's network management system.

61. Former Alcatel personnel have disclosed Alcatel's proprietary, confidential, and trade secret information regarding Alcatel's administrative software, and in particular its user interface, to Cisco, and that information has been used in designing the administrative software and the user



interface for the Wavelength Router. Cisco has thereby further misappropriated Alcatel trade secrets.

**E. Cisco's Raiding of Alcatel ASIC Engineers**

62. Cisco also hired Alcatel engineers who worked on and possessed confidential, proprietary, trade secret information concerning application specific integrated circuit ("ASIC") designs used in Alcatel's Lightwave and cross-connect products.

63. Former Alcatel personnel targeted and employed by Cisco in the ASIC area include Robert Hall (formerly a team leader of ASIC development in Alcatel's Lightwave Division), Lane Quibodeaux (also formerly a team leader of ASIC development in Alcatel's Lightwave Division), and Brian Allen (a member of the ASIC development team for Alcatel's Lightwave Division). Hall was employed by Alcatel until April 3, 1998, when he resigned to work for Cisco. Quibodeaux was employed by Alcatel until July 17, 1998, when he resigned to go to work for Cisco. Allen was employed by Alcatel until August 13, 1998, when he resigned to go to work for Cisco. At all times during their employment with Alcatel, Hall, Quibodeaux, and Allen were subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary, or trade secret information of Alcatel to any third party at any time.

64. Hall, Quibodeaux, and Allen each possess confidential, trade secret, and highly proprietary information concerning Alcatel's ASIC design and development for its Lightwave products which would be useful in the development and design of ASICs in the Wavelength Router. Over the course of their employment with Alcatel, Hall, Quibodeaux, and Allen were intimately involved in design and development of ASICs used in Alcatel's Lightwave products. Hall, Quibodeaux, and Allen are familiar with approaches to various aspects of Alcatel's ASIC design and development that Alcatel through the expenditure of funds and manpower has determined are not workable.

65. Cisco targeted Hall, Quibodeaux, and Allen because of their particular expertise in and knowledge of Alcatel's proprietary, confidential and trade secret information regarding Alcatel's ASIC designs and development to thereby gain a competitive advantage for Cisco's optical cross-connect product. Indeed, Cisco also directly solicited other Alcatel ASIC engineers and invited them to discuss ASIC employment opportunities, but was unable to lure them away.

66. Former Alcatel personnel have disclosed information regarding Alcatel's proprietary, confidential, and trade secret ASIC designs to Cisco, and that information has been used in designing ASICs for the Wavelength Router.

**F. Cisco's Raiding of Alcatel Technical Marketing Personnel**

67. Cisco hired Alcatel's technical marketing employees who possessed confidential, proprietary, and trade secret information. Former Alcatel technical marketing personnel hired by Cisco include John Adler (who formerly worked in Optical Networks Marketing at Alcatel), Parrish Autry (who formerly worked in Alcatel's AT&T Program Office), and Greg Nehib and James Anthony (both of whom formerly worked in sales for Alcatel, focusing on Alcatel's relationship with AT&T). Adler was employed by Alcatel until April 3, 1998, Autry until February 25, 1999, Nehib until May 14, 1999, and Anthony until August 20, 1999, when each resigned his position at Alcatel to go to work for Cisco. At all times during their employment with Alcatel, Adler, Autry, Nehib, and Anthony were subject to agreements not to use in any unauthorized manner or to disclose confidential, proprietary, or trade secret information of Alcatel to any third party at any time during or after their employment with Alcatel.

68. By virtue of their positions at Alcatel, Adler, Autry, Nehib, and Anthony possess confidential trade secret information concerning Alcatel's bidding strategies, marketing plans, pricing plans, and development schedules for Alcatel's optical cross-connect product lines, and how

Alcatel prioritized its responses to various performance issues in marketing and delivering its optical cross-connect products to customers, including specifically AT&T. Autry and Nehib both worked extensively on Alcatel's marketing and sale of OGX to AT&T. Before he left Alcatel for Cisco, Anthony worked on preparing Alcatel's response to the very same AT&T request for proposal for which Alcatel proposed the OLX and Cisco proposed the Wavelength Router.

69. Former Alcatel personnel have disclosed confidential, trade secret information concerning Alcatel's bidding strategies, marketing plans, pricing plans, and development schedules for Alcatel's optical cross-connect product lines, and how Alcatel prioritized its responses to various performance issues in marketing and delivering its optical cross-connect products to customers, including specifically AT&T, to Cisco and Cisco has used that information in connection with the marketing of the Wavelength Router.

**G. Alcatel's Protection of its Intellectual Property.**

70. The Alcatel trade secrets and confidential information at issue herein are subject to stringent security measures and controls including the designation of private or proprietary documents by appropriate labeling and markings, control of access to Alcatel facilities by badges worn by authorized personnel and restriction of access to such facilities by non-Alcatel personnel. Additionally, these trade secrets and confidential information are circulated within Alcatel only on a need-to-know basis and subject to agreements requiring recipients of such materials to preserve their confidentiality. Alcatel also requires employees to sign confidentiality policy statements, conducts periodic audits of confidentiality procedures, reminds employees during exit interviews of their ongoing confidentiality obligations, and limits computer network access.

71. Each of the Alcatel personnel identified above was subject to an obligation to Alcatel to preserve the confidentiality of Alcatel, confidential and trade secret information entrusted to them

during their employment at Alcatel. This obligation expressly survives the termination of their employment with Alcatel and forbids them from using or disclosing any such confidential or trade secret information, whether intentionally or unknowingly, directly or indirectly.

#### **STATE COURT PROCEEDING**

72. On August 31, 1999, Alcatel filed a Verified Petition and Application for Injunctive Relief in the District Court of Dallas County, Texas (44th Judicial District) alleging *inter alia* misappropriation and inevitable disclosure of trade secrets arising out of Cisco's raiding of Alcatel employees, captioned *Alcatel USA, Inc. v. Monterey Networks, Inc.*, Cause No. 99-06912 (Dallas County, 44<sup>th</sup> Dist.) ("State Court Action").

73. A Temporary Injunction Hearing was conducted in the State Court Action on October 19, 1999, and December 13, 14, 15, and 16, 1999. On March 27, 2000, The Honorable Judge Margaret Keliher issued a Temporary Injunction Order in the State Court Action enjoining Cisco from using certain software programs it misappropriated from Alcatel. A copy of the Temporary Injunction Order entered in the State Court Action is attached hereto as Exhibit C.

74. Because Alcatel's claims for infringement of the '959 Patent and copyright infringement are exclusively within the jurisdiction of federal courts and cannot be brought in the State Court Action, and because the unfair competition claims asserted in the State Court Action are substantially related to, and intertwined with Alcatel's claims for infringement of the '959 Patent and copyright infringement, Alcatel seeks to bring all of its claims in this Court, including the unfair competition claims brought in the State Court Action.

**COUNTS**

**COUNT ONE**

**(Infringement of U.S. Patent No. 5,455,959)**

75. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 74 above as if fully set forth herein.

76. Cisco has directly infringed and is directly infringing the '959 Patent by making, using, offering to sell, or selling within the United States, the Wavelength Router.

77. As a result of the unlawful patent infringement, Alcatel has been damaged in an amount that cannot presently be determined.

78. Cisco's unlawful patent infringement has caused Alcatel immediate and irreparable injury, and unless Cisco is enjoined, will continue to cause Alcatel such injury for which there is no adequate remedy at law.

79. The acts of infringement herein have been made with full knowledge of Alcatel's rights in the '959 patent. Such acts constitute willful and deliberate infringement, entitling Alcatel to enhanced damages and reasonable attorneys fees.

80. Cisco intends to continue its unlawful infringing activity unless enjoined from doing so.

**COUNT TWO**

**(Copyright Infringement)**

81. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 80 above as if fully set forth herein.

82. Cisco has infringed and will continue to infringe Alcatel's copyrights in Whip, WhipSource, and certain of its "make" file programs by reproducing them and using them to create programs for use in developing, maintaining, and building software for the Wavelength Router which are substantially similar to or derived from Whip, WhipSource, and certain of Alcatel's "make" files.

83. As a result of the unlawful copyright infringement, Alcatel has been damaged in an amount that cannot be presently determined.

84. Cisco's unlawful copyright infringement has caused Alcatel immediate and irreparable injury, and unless Cisco is enjoined, will continue to cause Alcatel such injury for which there is no adequate remedy at law.

85. Cisco intends to continue its unlawful copyright infringement unless enjoined from doing so.

**COUNT THREE**

**(Common Law Misappropriation)**

86. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 85 above as if fully set forth herein.

87. Alcatel's research and development of information, confidential trade secret information and other properties taken by and being used by Cisco were created by Alcatel through the substantial expenditure of labor, skill and money and possess a unique pecuniary interest for

Alcatel. Specifically, Alcatel has spent millions of dollars and thousands of staff hours to design and develop information taken and being used by Cisco, which, now is using such information to obtain a special advantage in competition with Alcatel because Cisco is burdened with little or none of the expense that Alcatel incurred to develop this information.

88. Alcatel has been injured as a proximate result of Cisco's misappropriation because its comparative advantage in the marketplace specifically with respect to Cisco has been substantially eroded. Additionally, Alcatel has been injured as a proximate result of Cisco's misappropriation because Alcatel has received no compensation for its use of Alcatel's trade secrets and other proprietary information. Cisco has acted maliciously and intentionally, without privilege to do so, in committing these acts of misappropriation.

#### **COUNT FOUR**

##### **(Misappropriation of Trade Secrets)**

89. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 88 above as if fully set forth herein.

90. The former Alcatel employees hired by Cisco were in possession of significant and valuable Alcatel trade secrets. These trade secrets have been misappropriated by and continue to be used by Cisco.

91. The Alcatel trade secrets in the possession of its former employees are economically valuable and not generally known to, nor readily ascertainable through proper means by, third parties such as Cisco. Cisco obtained economic value from the disclosure and use of Alcatel trade secrets because such trade secrets have allowed Cisco to develop certain products and technology that it would not have otherwise been able to develop at all or, alternatively, that would have required substantial additional expenditures of time, labor and money by Cisco to develop. Additionally,

Cisco obtained economic value from the disclosure and use of Alcatel's trade secrets because Cisco was able to circumvent research and development hours and expenditures.

92. Cisco has misappropriated Alcatel's trade secrets by acquiring those secrets when it knew that the trade secrets were acquired by improper means or by the violation of confidential relationships between Alcatel, on the one hand, and one or more of Alcatel's former employees, on the other hand.

93. Cisco's acts of trade secret misappropriation were willful, malicious, and in conscious disregard of the rights of Alcatel. As a result, Alcatel is entitled to preliminary and permanent injunctions to protect against further use, disclosure and transfer of these trade secrets. To the extent such trade secrets have already been used, disclosed or transferred, Alcatel is further entitled to its actual damages, punitive damages, permanent injunctive relief, attorneys' fees, interest and costs.

#### **COUNT FIVE**

##### **(Texas Theft Liability Act)**

94. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 93 above as if fully set forth herein.

95. By knowingly stealing Alcatel trade secrets, Cisco has also committed acts of theft of Alcatel trade secrets that give rise to liability under the Texas Theft Liability Act, Texas Civil Practice Remedies Code § 134.001, *et. seq.*



**COUNT SIX**

**(Tortious Interference with Existing Contracts)**

96. Alcatel incorporates by reference each and every allegation contained within paragraphs 1 through 95 above as if fully set forth herein.

97. Cisco has intentionally and maliciously interfered with the employment contracts and confidentiality agreements between Alcatel and its former employees without justification or excuse. Cisco knew that Alcatel had existing employment contracts and confidentiality agreements with its employees. Cisco nevertheless targeted those persons for recruitment with the intent to harm Alcatel to Cisco's benefit by inducing them to breach their confidentiality agreements with Alcatel by placing them in positions where they have disclosed or used confidential, proprietary and trade secret information of Alcatel in violation of their contracts. Cisco's conduct was knowing, intentional, willful, and deliberate, giving rise to Alcatel's right to recover punitive damages.

**COUNT SEVEN**

**(Constructive Trust)**

98. Alcatel incorporates by reference the allegations of paragraphs 1 through 97 above as if fully set forth herein.

99. The unlawful actions described above have, on information and belief, allowed Cisco to obtain title, possession, or other apparent right to property that Cisco, in equity and good conscience, should not be allowed to hold and enjoy.

100. A constructive trust should therefore be imposed on all of the property that Cisco has wrongfully obtained as a result of the unlawful conduct described above. Cisco would be unjustly enriched if allowed to retain such money and property and, in equity, should therefore be compelled to provide it to Alcatel.

**PRAYER FOR RELIEF**

WHEREFORE, Alcatel prays that the Court award relief as follows:

- (1) On the First Count,
  - (a) declaring that Cisco has infringed one or more claims of United States Patent No. 5,455,959;
  - (b) declaring that Cisco has willfully infringed one or more claims of United States Patent No. 5,455,959;
  - (c) preliminarily and permanently enjoining and restraining Cisco and its agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or participating with them from directly or indirectly infringing any one or more claims of United States Patent No. 5,455,959;
  - (d) awarding treble the amount of losses and damages because of the willful, knowing and wanton nature of Cisco's patent infringement; and
  - (e) declaring that this is an exceptional case within the meaning of 35 U.S.C. § 285 entitling Alcatel U.S.A., Inc. to an award of reasonable attorneys' fees, expenses, and costs in this action.
- (2) On the Second Count,
  - (a) declaring that Cisco has infringed Alcatel's copyrights in the Whip, WhipSource, and certain of its "make" file programs;
  - (b) preliminarily and permanently enjoining and restraining Cisco and its agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or participating with them from directly or indirectly infringing Alcatel's copyrights in Whip, WhipSource, and certain of its "make" files;

(c) entering judgment for Alcatel and against Cisco for damages based upon Cisco's acts of infringement, pursuant to the Copyright Act of 1976, 17 U.S.C. §§ 101 *et seq.*; and

(d) requiring Cisco to account for all gains, profits, and advantages derived from its acts of infringement and for its other violations of law, and awarding to Alcatel any profits attributable to Cisco's infringements of Alcatel's copyrights;

(3) On the Third and Fourth Counts, preliminarily and permanently enjoining Cisco and its agents, servants, employees, affiliates, divisions, branches, subsidiaries, parents, and all others acting in concert or participating with them from using, transferring, or otherwise disclosing Alcatel's trade secrets, proprietary information, products and property.

(4) On all Counts,

(a) awarding actual and compensatory damages in an amount to be determined at trial;

(b) awarding costs of suit incurred herein;

(c) awarding punitive damages in an amount to be determined at trial; and

(d) awarding pre- and post-judgment interest as provided by law.

(5) Requiring Cisco to file with the Court and to serve on Alcatel, within 30 days after service of the Court's order as herein prayed, a report in writing under oath setting forth in detail the manner and form in which Cisco has complied with the Court's order; and

(6) Awarding such other and further relief in law or in equity to which Alcatel may be justly entitled.

**JURY DEMAND**

Plaintiff Alcatel requests a trial by jury of all claims so triable.

Dated: June 1, 2000

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**United States Patent** [19][11] **Patent Number:** **5,455,959****Simmering**[45] **Date of Patent:** **Oct. 3, 1995**

[54] **SYSTEM FOR COLLECTING FROM MASTERS INFORMATION INDEPENDENTLY COLLECTED FROM ASSOCIATED SLAVES IN SHELVES OF A TELECOMMUNICATIONS TERMINAL**

[75] **Inventor:** Martin V. Simmering, Wendell, N.C.

[73] **Assignee:** Alcatel Network Systems, Inc.,  
Richardson, Tex.

[21] **Appl. No.:** 293,093

[22] **Filed:** Aug. 19, 1994

**Related U.S. Application Data**

[63] Continuation of Ser. No. 844,134, Mar. 2, 1992, abandoned.

[51] **Int. Cl.**<sup>6</sup> ..... G06F 13/38; G06F 13/22;  
H04L 12/403

[52] **U.S. Cl.** ..... 395/800

[58] **Field of Search** ..... 395/325, 800,  
395/725, 275; 370/85.5, 85.8; 364/132;  
340/825.06, 825.07, 825.08, 825.21

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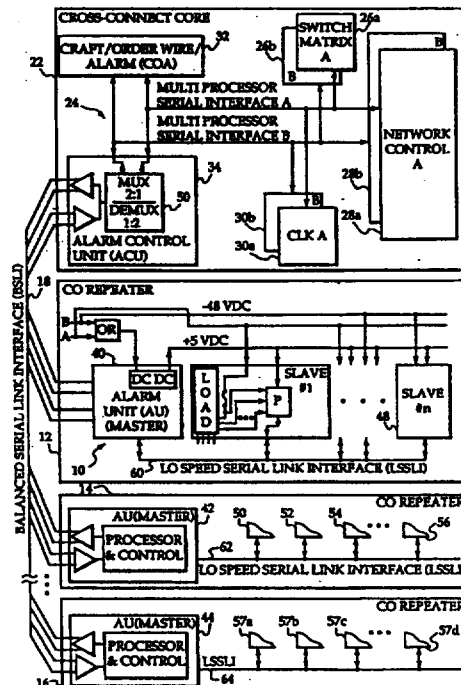
**Primary Examiner**—Krisna Lim

**Attorney, Agent, or Firm**—Ware, Fressola, Van Der Sluys & Adolphson

[57] **ABSTRACT**

An automatic inventory retrieval system collects inventory and status information regarding the presence or absence of plug-in master and slave units in the slots of various shelves in a telecommunications terminal, such as a network element, by having independent masters in each shelf polling associated slaves at a relatively frequent polling rate and collecting information for storage until reception of a relatively infrequent master polling signal provided from a network control unit to all of the shelves. Communication between the control and the various shelves is provided over a balanced serial link interface comprising differential pairs, whereas communications internal to the shelves and the network control may be by means of single-ended signals. Redundancy in the network element is accommodated with a single serial link between the central control and the shelves by use of time-division multiplexing. The relatively frequent slave address polling in the shelves may be done on the order of every several hundred milliseconds or less, whereas the relatively infrequent polling of the master units in the shelves by the central control occurs at a frequency on the order of once every second or more.

**2 Claims, 5 Drawing Sheets**



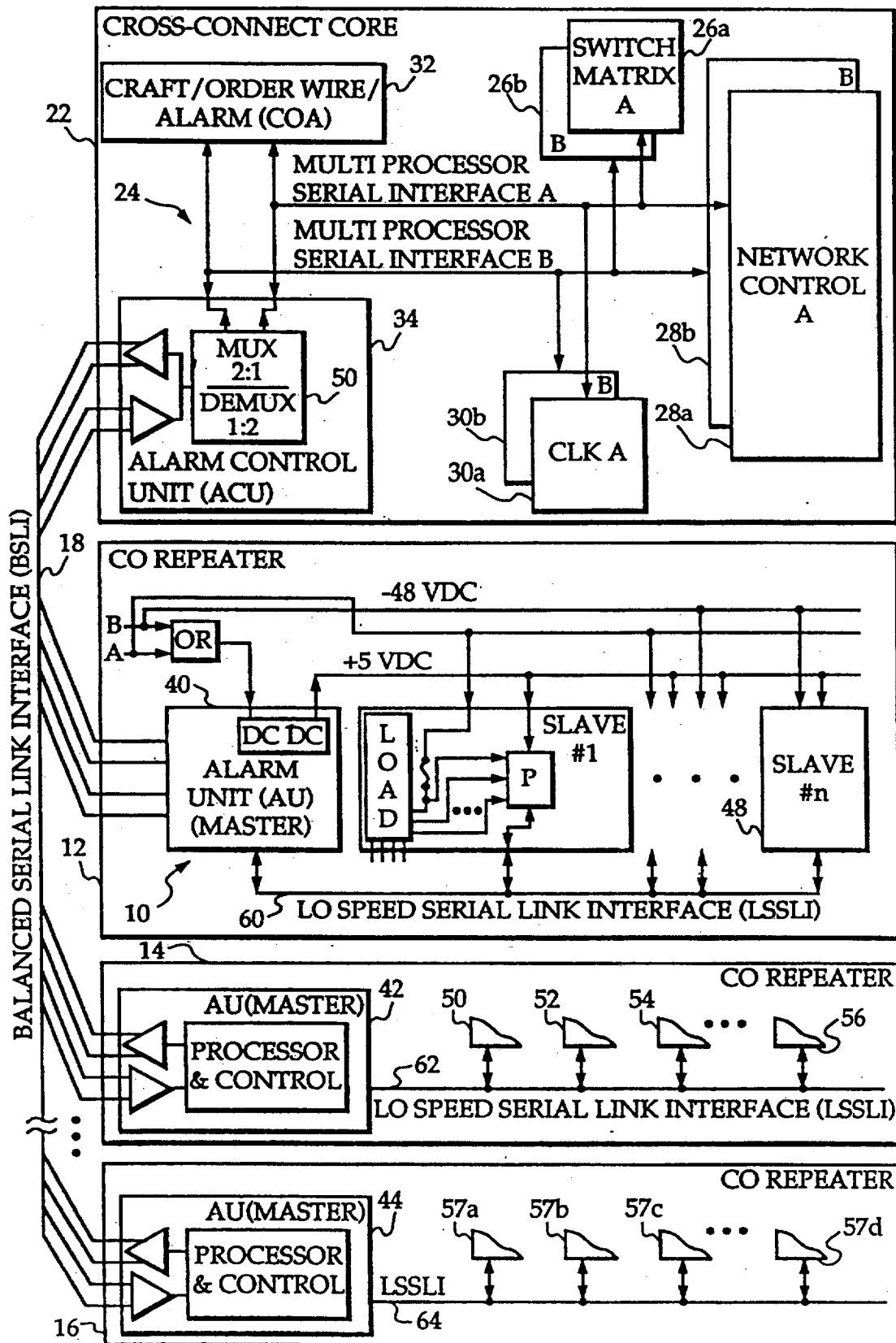
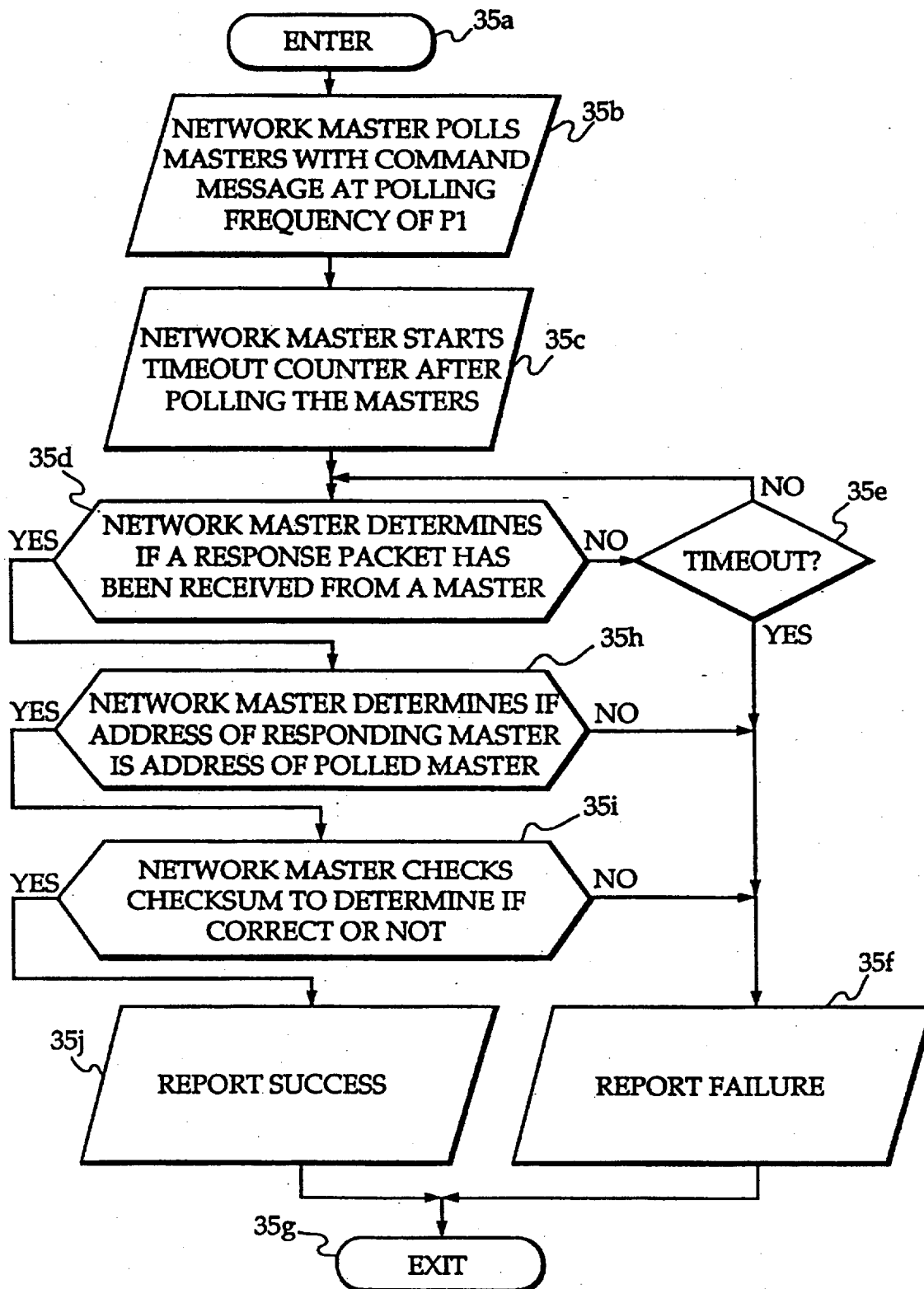
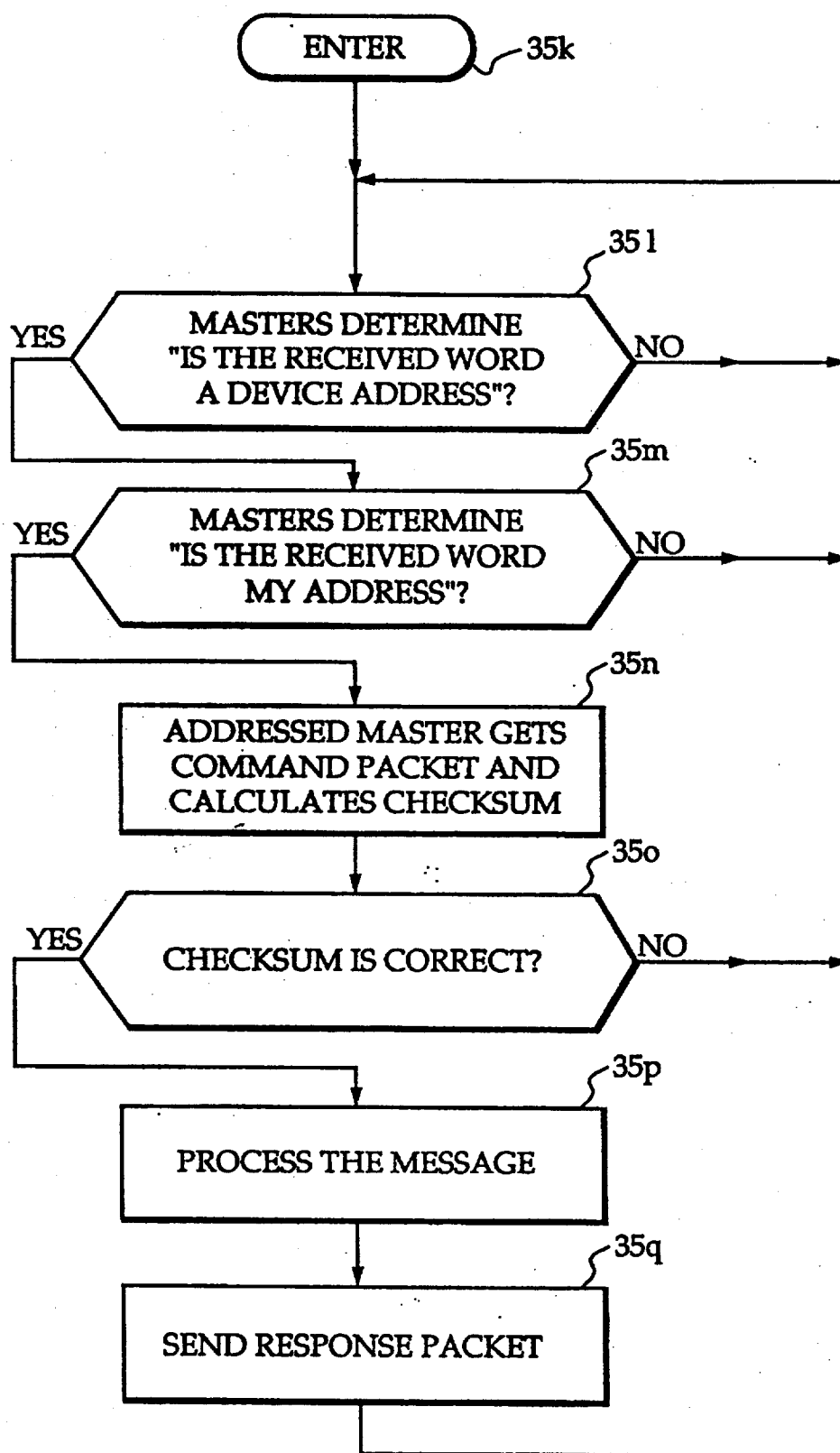
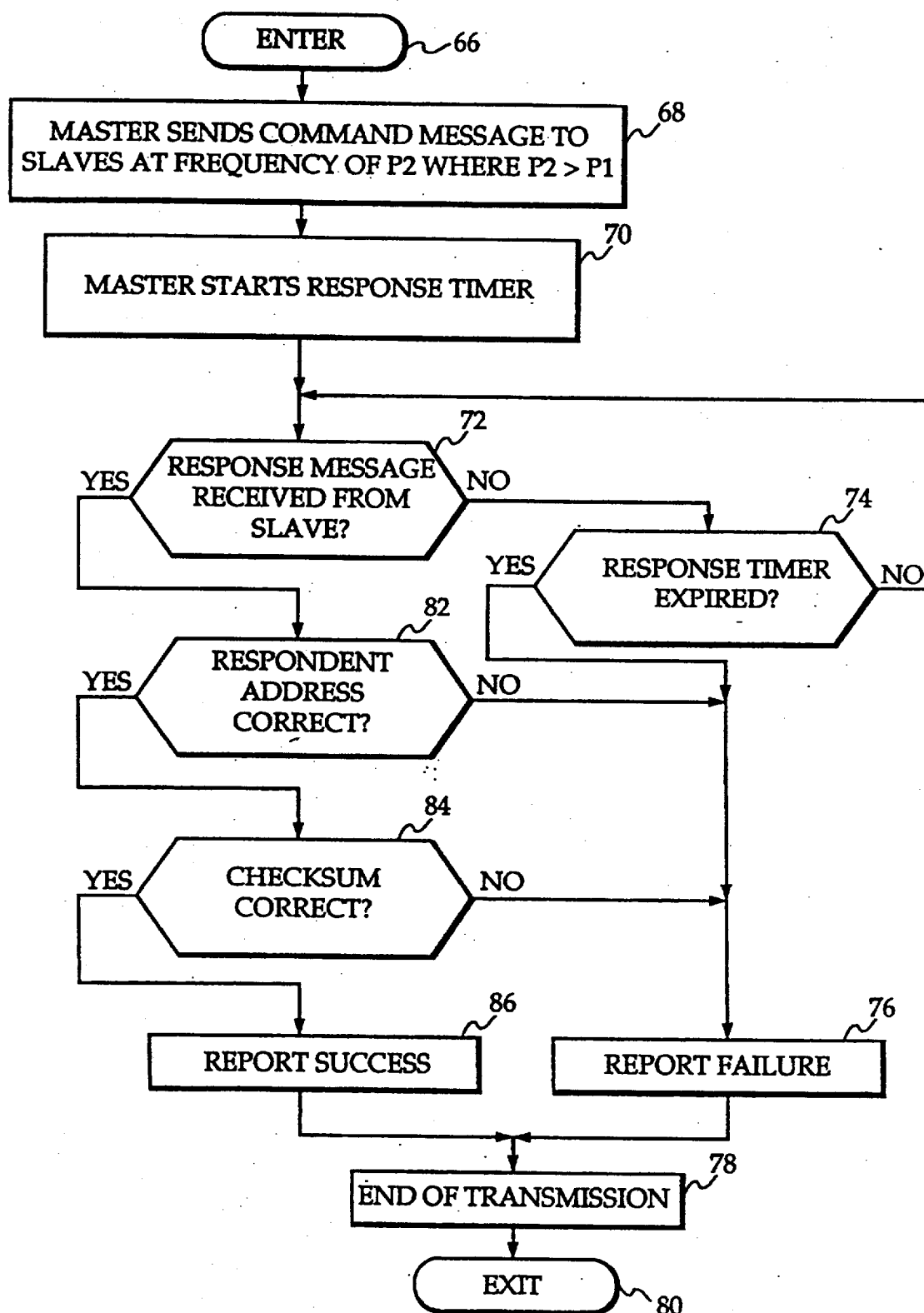


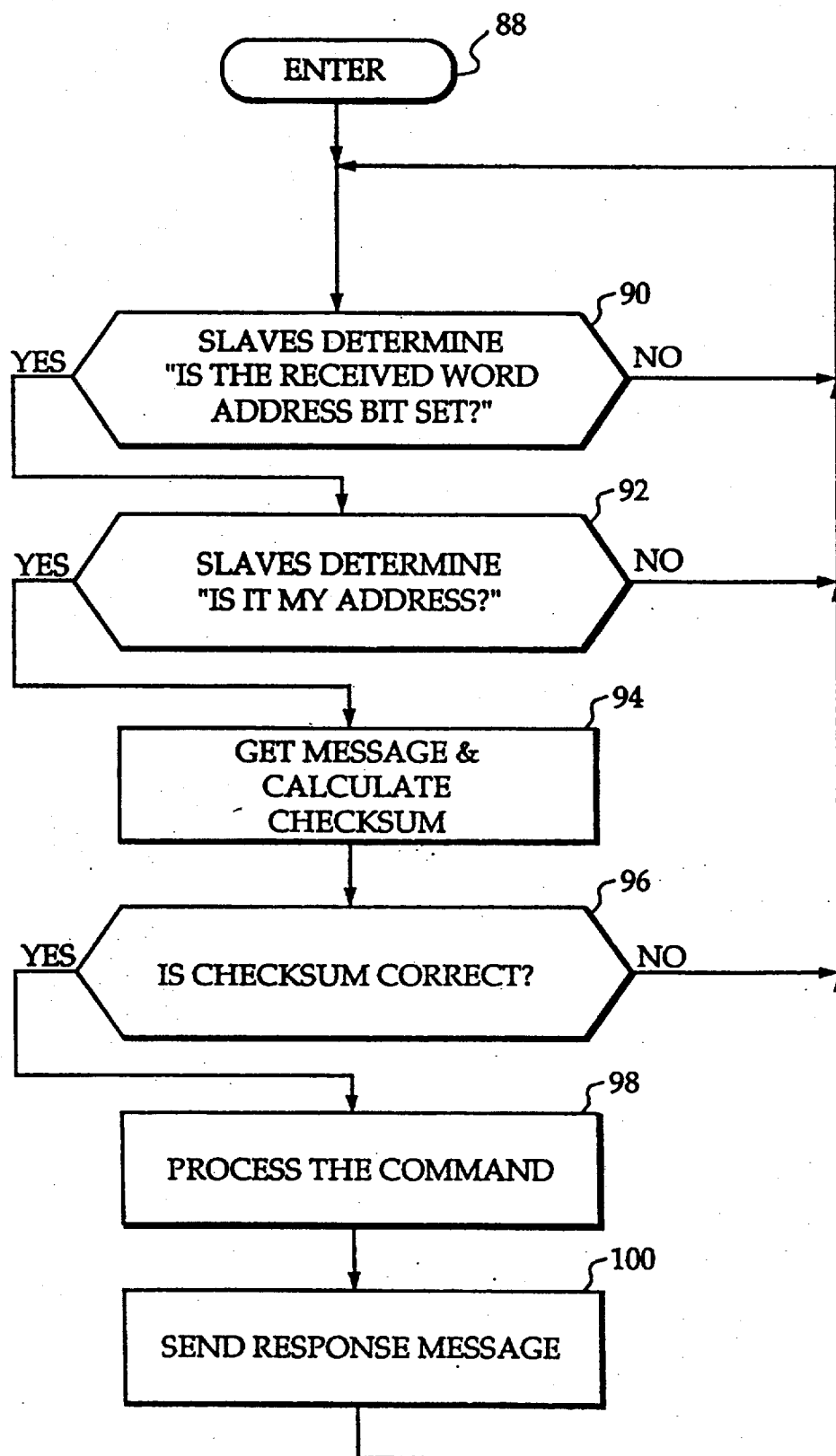
FIG. 1

FIG. 2

FIG. 3



FIG. 4

FIG. 5

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**SYSTEM FOR COLLECTING FROM  
MASTERS INFORMATION  
INDEPENDENTLY COLLECTED FROM  
ASSOCIATED SLAVES IN SHELVES OF A  
TELECOMMUNICATIONS TERMINAL**

This is a continuation of application Ser. No. 07/844,134  
filed on Mar. 2, 1992 now abandoned.

**CROSS REFERENCE TO RELATED  
APPLICATION**

Co-pending patent application U.S. Ser. No. 08/290,619  
filed Aug. 15, 1994 entitled "Multiple Function Micro  
Controller and Apparatus for Using the Same" discloses  
subject matter which is related to the subject case and is  
hereby incorporated by reference.

This specification discloses subject matter which is dis-  
closed and claimed in co-pending application U.S. Pat. No.  
5,323,145, issued Jun. 21, 1994 filed on the same day as this  
application. That case is hereby incorporated by reference.

**TECHNICAL FIELD**

This invention relates to telecommunications systems,  
and, more particularly, to a method and means of retrieving  
inventory and alarms electronically.

**BACKGROUND OF THE INVENTION**

A cross-connect core for a telecommunications network  
of cross-connects may require a high density span termina-  
tion system that transceives data. Such may be incorporated  
in a shelf consisting of a mechanical structure, back plane  
assembly, cabling, connectors and miscellaneous mechan-  
ical hardware. It may be designed to mount in a rack for  
containing a variable number of plug-in units which may be  
of different types. It may be designed so that no particular  
loading order is required so that in depopulated shelves,  
printed board assemblies may be plugged-in in any desired  
position.

One of the positions may be designed to accept a system  
alarm unit, for example, in the form of a plug-in printed  
board assembly. Such may be powered from a battery in a  
central office using a common return, for example. The shelf  
metal work may be connected to frame ground.

One or more of such termination systems may be con-  
nected to a cross-connect core for switching low speed  
signals such as DS-1 signals into and from a DS-1 interface  
of a high speed transport frame such as OC-1 for transmis-  
sion to other cross-connects at other locations.

A basic requirement of such a termination system is to  
provide a low cost method of retrieving inventory (a record  
of plug-in unit types) electronically. Because there may be  
many such termination system units connected to a single  
cross-connect core, it may be burdensome for the network  
control therein to assume any inventory and alarm retrieval  
tasks on a regular basis. Moreover, at the beginning at least,  
not all of the unit positions in a given shelf will be used and  
an inventory and retrieval architecture must thus be designed  
to allow for growth while at the same time not overburden-  
ing system computational requirements at the early stage.  
And, it would be desirable to accomplish all of this at low  
cost. Thus there is a primary problem in designing an  
architecture that must provide basic electronic inventory and  
alarm retrieval at a low cost for an initial product while  
allowing the system to be upgraded with later plug-in unit

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options so the system supports electronic provisioning (elec-  
tronically controlling a units transmission parameters and/or  
functionality).

Secondly, because of a potential for a large number, e.g.,  
sixteen termination systems that may be connected to the  
cross-connect core, the architecture must minimize the  
amount of additional processing required by the telecom-  
munication system network element which, without limita-  
tion, in the case illustrated, is a loop carrier cross-connect  
core having a dual network controller that carries out the  
network control function.

Lastly, the architecture should be of such a design, that it  
allows processors of various types and computational power to  
communicate over any interface therein.

**DISCLOSURE OF INVENTION**

According to the present invention, separate pluralities of  
slaves are polled for status information by means of asso-  
ciated masters at a first periodic rate, on the order of  
hundreds of milliseconds, while the associated masters are  
polled for the status information at a second periodic rate on  
the order of seconds.

In further accord with the present invention an apparatus  
for carrying out the present invention may comprise a  
plurality of slave units, each having a selected address and  
each-being responsive to relatively frequent slave address  
polling signals from an associated master unit, each slave  
providing, in response to a matching slave address and slave  
address polling signal, a slave response signal containing  
selected status information wherein the master is responsive  
to the slave response signals for providing selected slave  
response signals in response to a relatively infrequent master  
unit address polling signal, the master unit having a selected  
master address.

A network control may provide the master unit address  
signal and may be responsive to the selected slave address  
status response signals from the master unit. Moreover, a  
plurality of master units and associated slave units may be  
connected to the network control for inventory and alarm  
retrieval purposes as outlined above.

In an existing cross-connect core product of assignee, for  
example, a high speed multi-processor serial interface may  
be used as the point of interface for a plurality of termination  
systems each having a master and associated plurality of  
slaves. Thus, the control connected to the high speed multi-  
processor serial interface within several of assignee's exist-  
ing products may be used to connect a plurality of termi-  
nation systems and may poll the masters in each termination  
unit at a relatively infrequent rate, e.g., every 5 seconds,  
while the individual masters within each termination unit  
poll their associated slaves at a much higher rate, e.g., on the  
order of every 200 milliseconds.

In the assignee's existing products, the multi-processor  
serial interface is actually redundant. According further to  
the present invention, the multi-processor serial interface  
may be multiplexed from the cross-connect core to a single  
bus to reduce cost and complexity of wiring. Thus, the  
connection between the multi-processor serial interface and  
the various termination system units comprises a time mul-  
tiplexed single serial bus version of the separate, redundant  
buses within the core itself.

Also, according to the present invention, the single-ended  
TTL levels of the redundant buses within the core may be  
converted to differential pairs, one pair for the transmit  
direction and another pair for receive. Such a bus, may be

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characterized as a balanced serial link interface (BSLI) which may be compatible with the Electronic Industry Association (EIA) RS-485 standard. At the other end of the BSLI, i.e., at the termination units, the balanced pairs may be converted to single-ended TTL levels for processing by the master alarm units in each termination unit. The master units may also transmit response messages to the network controller within the cross-connect core over the BSLI.

Within the termination units themselves, a data link for inventory and alarms may be provided by a bus similar to the multi-processor serial interface but operating at a lower speed which may be called the low speed serial link interface (LSSLI). The LSSLI may use single-ended TTL level transmit and receive lines, operating at for example, 32 kb/s as opposed to for example, 128 kb/s for the multi-processor serial interface.

The master alarm unit within each termination unit collects and stores inventory and alarms from all other slave units in the shelf independently of the network controller within the cross-connect core. The cross-connect core network controller periodically polls the master units to determine if any changes have occurred in the status of the shelves plug-in units. If not, no additional data need be transferred.

These and other objects, advantages and improvements according to the present invention will become apparent in light of the detailed description of a best mode embodiment thereof and in light of the drawing which is described in brief below.

#### BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is an illustration of a network control interconnected to a plurality of master units each having a plurality of slaves associated therewith.

FIG. 2 is an illustration of a series of steps carried out by the network control in polling the masters.

FIG. 3 is an illustration of a series of steps carried out by the individual masters in responding to the polling command from the network controller.

FIG. 4 is an illustration of a series of steps carried out by each master in polling their associated slaves.

FIG. 5 is an illustration of a series of steps carried out by each slave in responding to polling signals from their associated masters.

#### BEST MODE OF THE INVENTION

In FIG. 1, an alarm collection and inventory architecture 10 is shown in detail within a central office (CO) termination shelf 12 which, among a plurality of shelves 14, . . . , 16, which, together with a balanced serial link interface (BSLI) 18 comprise an alarm collection and inventory retrieval architecture 20, according to the present invention. Although the architecture is shown in the context of a cross-connect it should be realized that it could be used elsewhere as well.

A cross-connect core 22 includes a multi-processor serial interface 24 which communicates with a switch matrix 26a, 26b (which is shown as being redundant but need not be), a redundant network control 28a, 28b (which need not be redundant), a clock 30a, 30b, a COA 32 and an alarm control unit (ACU) 34.

The cross-connect core is shown having an architecture which is peculiar to and common within a product line of Assignee hereof. However, it should be understood that the architecture of such a cross-connect core need not be exactly

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as shown in the figure but could be arranged in any number of different ways to accomplish the cross-connect function thereof. It should also be understood that the cross-connect core 22 contains many other functional blocks which are not shown here because of a lack of relevance to the present invention. Nevertheless, various patents and co-pending applications of Assignee describe such cross-connect functional elements such as U.S. Pat. No. 5,060,229 entitled "Serial Transport Frame Format Method"; U.S. Pat. No. 5,014,268, entitled "Parallel Timeslot Interchanger"; U.S. Pat. No. 5,161,152, entitled "High Speed Synchronous Transmission Access Terminal"; and U.S. Pat. No. 5,185,736, entitled "Synchronous Optical Transmission System", among others cross-referenced therein, all of which are hereby incorporated by reference. Also incorporated by reference is U.S. Ser. No. 08/290,679, filed Aug. 15, 1994, entitled "Multiple Function Micro-Controller and Apparatus for Using the Same" which performs multiple functions including inventory functions.

Although we provide a description of the multi-processor serial interface protocol hereinafter, it should be realized that various other protocols, communication topologies, physical layers and data link layers may be provided equally well for other embodiments of the present invention. In other words, the role of the cross-connect core, in the present invention is of minor importance and various other similar devices may be used in a way that takes advantage of the teachings hereof which primarily involve the alarm collection architecture 10 of the termination shelves and the inventory retrieval architecture 20 with respect to the termination shelves or similar devices which need to be inventoried or have their alarm informations collected by a network controller.

In light of the above therefore, the communication topology of the particular cross-connect core 22 used in the embodiment shown herein, is multi-drop line with one master and multiple slaves. In other words, the network control 28a, 28b is the master with the switch matrix 26a, 26b, the clock 30a, 30b, the COA 32 and the ACU 34 being the slaves.

For the procedural interface of the physical layer, the unit of information is the word. A word is composed of eleven bits and the sequence of bits is to start with the start bit which is always zero, eight data bits starting with the least significant bit, a frame start bit and a stop bit which is always one. The bit rate of the word is 128 kHz and is compatible with 8051 (Intel micro-controller).

At the data link layer, the frame format, comprising the unit of information in this layer, consists of five words beginning with word zero and ending with word four. Word zero is defined as the word with frame start bit equal to one. All other words in the frame must have the frame start bit set to zero. Each word in the frame follows each other word without any time gap.

Communication is initiated by the master by sending a command frame. The command frame is decoded by all the slaves, the selected slave answers the master by sending a response frame in a predefined time interval. The master cannot send another command before it receives response to the previous one or timeout occurs. The network control master protocol algorithm is shown in FIG. 2 and the slave (alarm unit) protocol algorithm is shown in FIG. 3. The network control polls the alarm units relatively infrequently, e.g., on the order of seconds, e.g., once every five seconds.

Thus, after entering in a step 35a, the network master polls the alarm units in the shelves, as shown in a step 35b and starts a timeout counter, as indicated in a step 35c. A step

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35d determines if a response packet has been received from a master and, if not, whether the timeout counter has expired or not, as indicated in a step 35e. If no response packet has been received from an alarm unit master and timeout has not yet occurred, then the steps 35d, 35e are repeated until a response packet is received or timeout occurs. With timeout, a failure is reported, as indicated in a step 35f, and an exit is made, as indicated in a step 35g. On the other hand, if a response is received, a step 35h is next executed in order to determine if the address of the responding alarm unit master is the address that was polled in the step 35b. If not, a failure is reported, as indicated in the step 35f, and an exit is made in the step 35g. If the responding alarm unit master address matches that of the polled master, a step 35i is next executed to determine if a checksum related to the received response packet is correct or not. If not, a failure report is made, as indicated in a step 35f and an exit made in step 35g. If the checksum is correct, then a success is reported, as indicated in a step 35j, and an exit is made, as indicated in the step 35g.

From the perspective of each of the alarm unit masters, as indicated in FIG. 3, the routine used for responding to polling queries from the network master, after entering in a step 35k, first determine in a step 35l whether a received word from the network master is a device address. If not, the step 35l is repeated endlessly until a received word is recognized as being a device address. Once this occurs, a step 35m is next executed in which each master determines if the received address word is its own address. If not, step 35l is again executed. If so, the address master obtains the command packet and calculates a checksum, as indicated in a step 35n. If correct, as determined in a step 35o, the message received from the network master is processed, as indicated in a step 35p, and a response packet is sent back to the network master, as indicated in a step 35q. The step 35l is then re-executed. If the step 35o determines that the checksum is not correct, the step 35l would be re-executed directly, and no message processing and no response would take place. The timeout of step 35e of FIG. 2 would then ultimately occur, and a failure reported, as described above.

For embodiments in the context of assignee's product line, network control 28a, 28b performs a remote inventory function. When the equipment inventory status is requested, the network control 28a, 28b will request the installed plug-in units in the repeaters 12, 14, . . . , 16 to provide unit base mnemonics and locations along with software part numbers and revision levels.

Various addresses may be assigned to the various units in a given cross-connect core. For example, the ACU 34 may be given an address Ex, the clock unit an address of 8x, and the COA unit may be given an address of xx. Each of these addresses may be accessed by the network control.

For message coding, commands and responses may have similar structures such as previously described in connection with the procedural interface, i.e., having word units composed of eleven bits arranged in five word frames. The first word may include the device address and a function code followed by a page number word and three subsequent words including the information for a given page number. For example, the ACU address Ex can be used as a device address and a functional code of 1110 can be assigned to a remote inventory functional code. This functional code may be used to retrieve the remote inventory information. The next word may comprise an eight bit page number, for example covering pages anywhere from 0 through 128. These pages may be given various meanings which can be interpreted in any remote inventory informational structure that is desired. For example, page number 0 may mean a

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read storage format. Page number 1 could read the digits 3 and 4 of manufacturer I.D. while digits 1 and 2 of the manufacturer I.D. might be contained in page number 2. A supplier code could be covered by page number 3. A unit part number may be covered by several pages as well as a serial number, a CLEI code, a programmed date, a revision level, a checksum, an inservice log function, etc.

In response, the unit being queried will respond with the requested information with data organized in a similar five word frame format, for example, using the first two words to echo back data received on the input frame and using the remaining words to send the information requested according to the function.

Alarm units 40, 42, . . . , 44, each contain a processor and control unit including memory for storing the data required by the remote inventory function. The storage format may be a two digit alpha/numerical character that permits the information to be stored in an EEPROM, for example, in different formats for different products. For example, a group of products might use a format "01" and a subunit such as a line card might have a format "02".

For each inventory retrieval request after a checksum is verified, the storage format may be checked. If the storage format is unknown, an error message may be returned and the process terminated. The message sent to read the storage format in the particular embodiment shown is to request page number 0 in the command message while the response contains the second and first digits of the storage format in the third and fourth words of the response frame. This is just one example of the various types of inventory commands and responses that have been described previously and need not concern us here.

It will be observed that the alarm control unit 34 contains a multiplexer/demultiplexer 50 responsive as a 2:1 multiplexer to both of the redundant halves of the multi-processor serial interface 24 and responsive as a 1:2 demultiplexer to incoming messages on a balanced serial link interface (BSLI) 18. Rather than connecting both halves of the multi-processor serial interface in a physically separable way, i.e., by running separate wires for each redundant bus to each of the shelves, the present invention teaches the use of a multiplexer/demultiplexer 50 which is capable of switching both redundant buses into one serial bus (and vice versa) so that the redundancy at least at the data level is retained, if not physically. This provides a low cost approach to inventory retrieval and alarm collection. Using this approach, the termination shelves may be redundant or not, as desired. If not, the information is merely duplicative rather than truly redundant.

The ACU 34 is connected to each of the CO termination shelves 12, 14, . . . , 16, by means of the balanced serial link interface (BSLI) 18 to form an alarm and inventory retrieval architecture 20, according to the present invention.

The multi-processor serial interface 24 may be a single-ended TTL signal which is inappropriate in the context of the embodiment for connecting the shelves to the cross-connect core since a more robust signal happens to be required for the distances involved. Therefore, according to the embodiment hereof, a balanced serial interface link 18 is provided. The BSLI represents the single ended TTL signals as a differential pair, one pair for the transmit direction and another pair for receive. This bus is EIA RS-485 compatible, providing the capability to drive up to sixteen repeaters.

Each shelf includes provision for multiple plug-in units so that the system can take a small or a large number of slave units 46, . . . , 48. Because up to sixteen shelves may be

accommodated in the particular embodiment shown, according to the present invention, it would be overly burdensome for the network control 28a, 28b to have to individually poll each slave in each shelf, considering for the embodiment shown that there may be up to twenty-nine different slaves with one master alarm unit in each shelf. Thus, according to the present invention, in order to minimize the amount of additional processing required by the network control, in this embodiment located in a telecommunication system network element 22, the each alarm unit 40, . . . , 42, 44 is given the task of supervising inventory retrieval and alarm collection for the individual slaves associated with its particular shelf. Thus, the alarm unit 40 in shelf 12 is in charge of slaves 46, . . . , 48 while the alarm unit 42 in shelf 14 is responsible for slaves 50, 52, 54, . . . , 56, and so on. Moreover, it should be understood that the interface described is of such a design that it allows processors of different types and computational power, not necessarily the same type of unit in every case, to communicate over this interface.

At the shelf end of the BSLI 18, the alarm units 40, 42, . . . , 44 connect to the balanced pairs and convert the signals to single-ended TTL levels on a LSSLI bus 60 and back again. These signals are received and processed by the alarm units. Thus, the alarm units also transmit response messages from the slaves to the network control 28a, 28b.

Thus, within each of the shelves 12, 14, . . . , 16, there is a separate low speed serial link interface 60, 62, . . . , 64, for collecting inventory and alarms (from addressable slaves) which operates at a lower speed than the multi-processor serial interface 24 in the cross-connect core 22. For example, the multi-processor serial interface 24 might operate at 128 kb/s while the low speed serial links might operate at 32 kb/s. The LSSLI's use single ended TTL level transmit and receive lines. The alarm units 40, 42, . . . , 44 collect and store inventory and alarms from all of their associated slave units in their respective repeaters independently of the network control 28a, 28b.

The network control 28a, 28b periodically polls, e.g., every 5 seconds, the alarm units 40, 42, . . . , 44 to determine if any change has occurred in the status of the particular shelf's plug-in units. If not, no additional data need be transferred and the computational burden on the network control is tremendously reduced.

Thus, the alarm units use the low speed serial link interfaces to communicate with other units in the shelf. This bus may operate at 32 kb/s, but otherwise is similar to the core's MSI in structure and protocol. The alarm unit is the bus master and all other devices are slaves. The alarm unit initiates all LSSLI transmissions, sending a data burst containing the address of, and data for the target slave. The slave responds by executing the command and returning a transmission containing any requested data. The polling rate may be on the order of, e.g., hundreds of milliseconds, e.g., every two hundred milliseconds.

In addition to performing bit rate and electrical signal format conversion between the MSI and LSSLI, the AU is also intended to off load the processing required at the core. To accomplish this, the AU continuously updates a local record of each plug-in within its respective shelf, reducing the network control processing load and the core's MSI bus traffic. The AU services requests for data from the network control on an interrupt basis. It may include an 80C31 micro-controller as the processor. It may include a watchdog timer to detect the loss of processor sanity, a store memory with, for example, a minimum of 16 kbits of nonvolatile

external program storage memory for access by the AU processor and, for example, a minimum of 4 kbits of external data memory for access by the AU processor. Two serial interface ports are required on the AU. One port is connected to the BSLI 18 to provide the network/AU link and the second port connects to the LSSLI 60, allowing inventory and alarm retrieval. The AU may be set up to appear as a slave unit to the core 22 and may transceive data at 128 kb/s over the BSLI interface. The AU may communicate with the core using a selected type code and fixed address. The second, i.e., LSSLI port, is required to interface the slave thereto. There, the AU may transceive serial data at 32 kb/s and according to the protocol to be described below.

As mentioned, the inventory of the AU is performed on the LSSLI bus that collects inventory from the slaves. The AU incorporates an LSSLI transceiver connected to appear as a bus slave device to the AU processor.

The AU may monitor both an A and B -48 volt battery distribution/bus via two of the LSSLI transceiver alarm status inputs. In that case, the AU forwards the battery (assuming, without limitation, a central office battery supply) status to the network control 28a, 28b when requested by a network control alarm query command. The AU processor may read the status of either the A or B -48 volt power distribution via a device and status command. The status of the A power distribution bus may, for example, be transmitted in status bit position one and that for the B bus in status bit position two.

The AU may interface to the LSSLI using four signals. Such signals may include "transmit data", "receive data" "4 MHz oscillator" and "reset". The AU may operate using nominal -48 volt DC power and to minimize down time, the unit may OR the -48 volt A and -48 volt B power distributions. The ORed distributions may feed a single fuse.

According to the present invention, a separate voltage supply, such as +5 volt DC, is generated from the main distribution bus, e.g., -48 volts DC, by a DC to DC power converter which may be within the AU. This supply is used to power on-board circuitry and, according to the invention, to source power to one or more or all of the slave devices within the particular shelf associated with the AU. This powering scheme eliminates nuisance alarms caused by "hot signals" which might otherwise already be on the back plane when the AU is inserted. The powering scheme also has advantages when detecting power failure alarms on the slave units.

In the embodiment shown, because of the plug-in units' limited number of pins, power and cost considerations, previously used methods to detect alarms when plug-in units lost power were not efficient. The present architecture solves this problem and yields other benefits. In this architecture, each slave unit is individually powered from the -48 volt shelf battery distribution bus. However, the alarm unit is common in that it sources power (+5 volts generated by the alarm unit) to all the other slave units in the shelf. The alarm unit also drives the LSSLI inventory bus in transmitting data to and receiving data from the slaves. Because each slave's alarm monitoring circuit is independently powered by the alarm unit's +5 volt source, when one or more slaves lose power (from the -48 volt distribution) their alarm monitoring circuits remain functional. Since half the slaves may be powered by the A -48 volt DC bus and the other half by the B -48 volt DC bus, half the units will remain fully on-line even though half may lose most functions. This system allows any slaves loss of power to be detected by its alarm monitor circuit and reported (transmitted) to the alarm unit via the inventory bus.

A side benefit of this power scheme is the reduced possibility of CMOS circuit latchup as a result of the scheme eliminating "hot signals" on the back plane, as previously discussed when the AU is inserted.

The LSSLI interface protocol will now be described. As mentioned above, the low speed serial link interface is a multi-drop link that transfers data between the bus master (AU) and up to a maximum of 32 slaves, for example. The bus operates in a byte synchronous-bit asynchronous mode, at 32 kb/s. Two lines, one for transmit and one for receive may be used to carry data between the master and slaves. The master retrieves data by sending commands to the slaves and then waiting for a response. A slave may transmit information only after receiving a request from the master.

With respect to bus contention, since all transmit outputs are multiplied, only one slave is allowed to drive the bus at a time. Prior to the start and after the end of a transmission, the addressed slave sets its transmit output to a high impedance state. All other unaddressed slaves must set their transmit output to a high impedance state. To assure that the bus remains in a high state when all slaves are tri-stated the master pulls the bus to logic high.

With respect to data synchronization, as mentioned earlier, the LSSLI bus operates in a byte synchronous-bit asynchronous, meaning that each word is individually synchronized but each bit within the word is captured asynchronously. This synchronization technique requires the transmitter and receiver clocks only to be accurate enough to reliably clock in one data word, since resynchronization will occur for each subsequent word. This allows flexibility in the number of words that may be contiguously strung together to form broader transmission bursts without requiring increased clock accuracy.

Each shelf 12, 14, . . . , 16, implementation should provide a distributed clock to all slave devices sourced by the master. Since all transmitters and receivers are then clocked by the same source, effects of drift and jitter are virtually eliminated. The nominal frequency of the distributed clock may be, for example, 4.096 MHz. Each slave may be identified by a 5 bit binary address.

With regard to the software topology for the LSSLI bus in the embodiment shown, the word format is the basic unit of information which is composed of 11 bits. The sequence of bits may be defined as a start bit followed by 8 data bits, an address/data bit and a stop bit. The address/data bit identifies the word as containing address information or data information. The last (stop) bit is always a logic one that marks the end of the word and readies the bus for the next start bit transition.

With regard to frame format, hierarchically, in the embodiment shown, the frame is a broader unit of information than the word. A frame may be composed of six words containing a first word in the form of an address word and all subsequent words containing data or checksum information.

With respect to error timing, communication is initiated by the master sending a command frame to a slave. The slave then responds by returning a response frame to the master within a predefined time period. The master cannot send another transmission until either the response frame is received or a timeout occurs. The errorproofness of the interface is ensured by the master sending the command frame a selected number of times, e.g., three times every 60 milliseconds, in the absence of a response.

Due to the repetitive send behavior of the slaves, there can be no history-based responses in a slave's response algo-

rithm unless a slave's maximum number of retries is limited to one. This is required to prevent the transmission of corrupted data to the master.

The master protocol algorithm is shown in FIG. 4 while the slave protocol algorithm is shown in FIG. 5. As mentioned, the polling rate may be selected at any convenient rate such as on the order of hundreds of milliseconds, say, every 200 milliseconds.

Referring first to FIG. 4, after entering in a step 66, a given alarm unit master 40 sends a command message to each of its associated slaves, as indicated in a step 68, at a polling frequency greater than the frequency with which the alarm unit masters are polled by the network control. The repetition rate of the master polling may be on the order of hundreds of milliseconds, while that of the network control may be on the order of seconds. After the master sends the command message to the slaves on the low-speed serial link interface, the master starts a response timer, as indicated in a step 70, to determine whether the particular polled address is present or not. If no response is received during a particular polling cycle, a pair of steps 72, 74 report a failure, as indicated in a step 76, and that particular polling cycle will be ended, as indicated in a step 78, after which an exit is made in a step 80. If one of the slaves responds to the polling address from the master within the timeout period, as determined in the step 72, a determination is next made in a step 82 whether the responding slave is responding with the correct address. If not, a failure is reported in the step 76, and the polling cycle ended, as indicated in the steps 78, 80. After a determination in step 82 that a slave at the correct address has responded to the command message sent out in step 68, then a checksum is calculated in a step 84. If correct, success is reported in a step 86, and the transmission is ended and the routine exited, as indicated in steps 78, 80. If the checksum is not correct, a failure is reported in the step 76, the transmission is ended and the routine exited in the steps 78, 80.

Turning now to FIG. 5, each of the slaves in a shelf will execute the steps shown. After entering in a step 88, a step 90 is executed, in which a slave determines if the command message sent in step 68 of FIG. 4 is an address. If not, step 90 is executed repeatedly until an address command message is received. Once this occurs, a step 92 is executed by the slave to determine if the received address is its own address. If not, step 90 is again executed. If it is the address of the slave, a step 94 is executed to get the rest of the message and calculate a checksum. Once this is done, a step 96 is executed to determine if the checksum is correct or not. If not, step 90 is again executed, and command processing ceases without any response being sent. In that case, the response timer of the loop 72, 74 of FIG. 4 would timeout and an failure reported in step 76. If the checksum is correct, a step 98 would next be executed and the command processed. A response message is then sent back to the alarm unit master 40 on the low-speed serial link interface 60, for example, by a slave 48. The step 90 is again executed.

As mentioned, low speed serial link interface transceiver is included in each alarm unit and slave as an economical micro-controller with software tailored to implement the LSSLI protocol. The software can perform read/write operations to a 93C46 EEPROM via I/O port D. This combination of hardware and software (herein referred to as the transceiver) does not fully exploit the intended uses of the LSSLI bus.

The transceiver implements the following functions:

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1. Provides read access to any of the EEPROM locations.
2. Provides write access to any EEPROM location using a guarded protocol.
3. Transmits the processor device type and software version codes to the master.
4. Provides an unprotected write command for updating the inservice register.
5. Supports format 03 and 04 EEPROM data storage formats.
6. Retrieves three alarm/status bits with a fourth made available by adding an external AND gate.
7. Provides a software restart command.
8. Provides a data loopback command for verifying link integrity.

The bus master may communicate with any slave using the transceiver, according to the protocol to be described above as in FIGS. 4 and 5.

As suggested, the command and response definitions may be selected in a manner similar to those described already in connection with the multi-processor serial interface.

The command and response definitions may include loopback functions wherein a loopback command causes all received data to be captured and retransmitted. All data in the command is echoed in the response. In the particular embodiment described above, the commands and responses are organized in frames having six words of 11 bits each with a START bit first, followed by an address bit and ending with a STOP bit with informational bits in between.

Other functions that have been implemented include a device and status retrieval command that reads the response containing the device type code, software version and status bits of the slave. Another command called restart causes the slave to soft-restart including reinitializing internal registers, checking an application select pin, and reading a slot address. A read inventory command allows the master to read 4 bits of EEPROM data at the specified slave address, starting at the specified EEPROM address range. As described above, in connection with the multi-processor serial interface protocol, the memory may be organized as 64 pages of 16 bit registers.

A write in-service command writes two bits of data into an in-service register. A write inventory command allows the master to write 4 bits of EEPROM data the specified slave address, starting at the specified EEPROM address range.

The shelves 12, 14, . . . , 16 described above, may transceive 1.544 Mbit/s data over T1 lines but may also be designed to support extensions of other signals such as serial bus interface signal such as described in co-pending application U.S. Ser. No. (Attorney Docket No. 907-045) entitled "High Speed Port Converter" U.S. Pat. No. 5,060,229 entitled "Serial Transport Frame Format Method" and co-pending application U.S. Ser. No. 07/351,861 entitled "Synchronous Optical Transport System" which are hereby incorporated by reference.

As mentioned, the repeater shelves are powered by two -48 volt DC power distributions designated as "-48 volt A" and "-48 volt B". Fuse requirements are dependent upon the type of printed board assemblies equipped in the shelf. A common ground bus (-48 V RTN) returns current to the office battery. For improved reliability this bus may be equipped with two battery return terminals, but the use of both terminals is of course optional.

As mentioned, the AU position and universal positions 1-15 may but need not be powered from -48 v A. In that case, positions 16-29 and the AU are powered from -48 v B. The AU in that case is the only unit position with both

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battery distributions (ORed) and available at the back plane.

The internal +5 V power distribution may be connected as a single trace from the AU to each universal (slave) position. Since this is powered by an internal power supply external connections are required. Minus 48 V RTN may be used as the return for +5 v.

Three alarm buses are distributed as wire OR'ed links connecting the AU (position 0) to each universal position. The alarms reported over this bus are fuse alarm, loss of signal and line code error. The signal names for the buses are fuse, alm\*, los alm\*, and err alm\*. The alarm buses intended to operate on -48 v, sourced by the AU. One or more units operating in the universal positions may activate the bus by pulling it low (-48 v RTN).

With regard to alarm outputs, when the shelf is equipped with the AU, 14 alarm output leads are available. The AU generates the alarm outputs based on the state of the internal alarm buses and/or shelf battery voltage failures.

The low speed serial link interface (LSSLI) is a wire ORed link that transfers data between the "smart" AU and the slaves. As further mentioned, the bus operates in a byte synchronous-bit asynchronous mode, at 32 kb/s. As further mentioned, the AU is the master and all others are slaves. The master retrieves data by sending commands to the slaves and then waiting for a response. The slaves may not speak unless first spoken to.

The data is sent in 11 bit words. The first bit is called the "start bit" and always begins as a transition from high to low which signals the start of a word. The start bit remains low for a full bit time (e.g., 31 microseconds). Eight data bits then follow and are interpreted according to the state of the tenth bit, and address/data bit which indicates whether the data in the word is address (if high) or data (if low). The last bit is called the "stop bit" and always a logic high.

After reception of an address word by the slaves, all slaves compare the address value to their address. The slave which has a matching address then must receive, interpret and respond to subsequent command words. All other slaves must continue to monitor the bus for ensuing address words.

The data is normally sent with a checksum value included in the last word. Should a checksum error occur, the slave does not respond. The AU tries to communicate to a particular address up to three times. If after the third try, no response is received it may be assumed that the unit is missing or failed.

For this embodiment of the invention, the interface uses nine pins, two for data, five for address, one for power, and one to supply an oscillator signal to the micro-controller. Data is transmitted by units in the slave positions on a TXD lead and received on a RXD lead. Back plane address pins apply logic 0 (-48 V RTN) and logic one (open pin) such that an incremental binary address (0-28 decimal) is presented on the address pins for positions 1-29, respectively. This approach requires that all ID pins on the printed board assembly be pulled high.

As mentioned, according to an important teaching of the present invention, to gain cost and reliability advantages, +5 volts and the oscillator signal are provided by the AU and supplied to all slave positions.

As also mentioned, the LSSLI's intended use is for remote inventory, remote provisioning and remote alarm isolation and collection.

The balanced serial link interface (BSLI) is a multi-drop link that transfers data between the "smart" AU and the network control processor. The bus operates in a byte synchronous-bit asynchronous mode at 128 kb/s. The network controller is the master and all AUs are the slaves. The



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master retrieves data by sending a command to an AU at a specific address and then waiting for a response. The AU slaves may not speak unless first spoken to. The BSLI interface requires four pins, two for transmit data and two for receive data, the address for the AU may be set on the printed board assembly for the AU. The BSLI allows up to sixteen AUs to be addressed and controlled via a single network control.

Although the invention has been shown and described with respect to a best mode embodiment thereof, it should be realized that other embodiments, changes and modifications thereto may be made while still remaining within the spirit and scope of the claimed invention.

I claim:

1. A telecommunications terminal having an automatic inventory retrieval system for collecting inventory and status information relating to printed circuit (PC) boards for use in separate printed circuit board housings of said telecommunications terminal, said telecommunications terminal comprising:

a cross-connect core, having network controls for providing master PC board address polling signals that occur at a master polling frequency on a terminal bus for providing the master PC board address polling signals; and

a plurality of said PC board housings, each housing for housing PC boards connected to an associated serial link interface wherein said PC boards for each housing include:

a plurality of slave PC boards connected to said associated serial link interface, each slave PC board having a selected address in said housing, each slave PC board responsive to slave address polling signals that occur at a slave polling frequency that is greater than said master polling frequency on said associated serial link interface, each slave PC board for providing on the associated serial link interface in response to a matching slave address and slave address polling signal, a slave response signal containing selected inventory and status information; and

a master PC board for connection to said terminal bus and to said associated serial link interface, for pro-

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viding the slave address polling signals on said associated serial link interface and responsive to the slave response signals, for providing said slave response signals on said terminal bus in response to a matching one of the master unit address polling signals, the master PC board having a selected master address;

wherein the cross-connect core is responsive to the slave response signals on said terminal bus from said master PC board for said collecting inventory and status information.

2. A system for collecting status information relating to, printed circuit boards on a terminal bus in a telecommunications terminal having at least one printed circuit board housing for housing said printed circuit boards and a controller to which said at least one printed circuit board housing is connected by said terminal bus, each of said at least one printed circuit board housing having a plurality of circuit boards connected to a housing bus wherein said printed circuit boards include a plurality of slave circuit boards, each slave circuit board having a selected address, each responsive to slave address status request signals provided on said housing bus, each slave unit providing on said housing bus, in response to a slave address status request signal that matches its selected address, a slave address status response signal containing selected status information; wherein said circuit boards include a master circuit board for each of said at least one printed circuit board housing, for providing the slave address status request signals on said housing bus and responsive to the slave address status response signals on said housing bus from the slave circuit boards for providing selected slave address status response signals on said terminal bus in response to a master circuit board address signal on said terminal bus, the master circuit board having a selected master address; said telecommunications terminal having a controller, for providing the master circuit board address signal on said terminal bus and responsive to the selected slave address status response signals from the master circuit board in the at least one printed circuit board housing for said collecting status information.

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Material Added to This Work. Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

a 7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

b

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

Email ►

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

☐ author☐ other copyright claimant☐ owner of exclusive right(s)☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate  
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Name ▼

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Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

\* Complete all necessary spaces  
\* Sign your application in space 81. Application form  
2. Nonrefundable filing fee in check or money order payable to Register of Copyrights  
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Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

9

As of  
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Form TX  
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June 1999—200,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

EXAMINED BY <i>[Signature]</i>	FORM TX
CHECKED BY	
<input type="checkbox"/> CORRESPONDENCE Yes	FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

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Year of Registration ►

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## DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

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June 1999-200,000  
WEB REV: June 1999

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EXAMINED BY

FORM TX

CHECKED BY

☐ CORRESPONDENCE

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WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

EXAMINED BY <i>SC</i>	FORM TX
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Plano, TX 75075

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Date ► May 4, 2000

Handwritten signature (X) ▼

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WEB REV: June 1999

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## CERTIFICATE OF REGISTRATION

**FORM IX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE

REG

TXu 909-302



EFFECTIVE DATE OF REGISTRATION

5 5 00

Month Day Year

ATE CONTINUATION SHEET.



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

1

OFFICIAL SEAL

REGISTERED OF COPYRIGHTS

TITLE OF THIS WORK ▼

United States of America

BUILD\_TOOLS/WHIPSOURCE.PL (V.1.1)

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼

Number ▼

Issue Date ▼

On Pages ▼

2

NAME OF AUTHOR ▼

Alcatel USA, Inc.

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a "work made for hire"?

☒ Yes☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR

Citizen of ▼

Domiciled in ▼ U.S.A.

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☒ NoPseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

Computer Program

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NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3

a

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED

1995

This information must be given in all cases.

b

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month ▶

Day ▶

Year ▶

Nation

4

See instructions before completing this space.

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED  
MAY 05, 2000

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FUNDS RECEIVED

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Page 1 of 2 pages





## CERTIFICATE OF REGISTRATION



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

**FORM 1X**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE  
REG

TXu 909-298



TX (TXU)  
EFFECTIVE DATE OF REGISTRATION

5 5 00

Month Day Year

REGISTER OF COPYRIGHTS DATE CONTINUATION SHEET.

1

**TITLE OF THIS WORK ▼**

United States of America

BUILD\_TOOLS/MAKEFILE (V.1.1)

**PREVIOUS OR ALTERNATIVE TITLES ▼**

**PUBLICATION AS A CONTRIBUTION** If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work ▼**

If published in a periodical or serial give: **Volume ▼** **Number ▼** **Issue Date ▼** **On Pages ▼**

2

a

**NAME OF AUTHOR ▼**

Alcatel USA, Inc.

**DATES OF BIRTH AND DEATH**

Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**

Name of Country

OR { Citizen of ▼  
Domiciled in ▼ U.S.A.

**WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK**

Anonymous? ☐ Yes ☒ No

Pseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

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Computer Program

**NOTE**

Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b

**NAME OF AUTHOR ▼**

**DATES OF BIRTH AND DEATH**

Year Born ▼ Year Died ▼

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☐ No

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**DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK**

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Month ▼ Day ▼ Year ▼

Nation ▼

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Plano, TX 75075

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Page 1 of 2 pages

## CERTIFICATE OF REGISTRATION

**FORM TX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE  
REGISTRATION NUMBER

TXu 909-297



TXU909297

EFFECTIVE DATE OF REGISTRATION

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United States of America

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<input type="checkbox"/> Yes	COPYRIGHT
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Copyright Office  
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June 1999—200,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 1999-454-878/49

## CERTIFICATE OF REGISTRATION

**FORM TX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

TXu 909-301



EFFECTIVE DATE OF REGISTRATION

5 5 00  
Month Day Year

1

OFFICIAL SEAL

**TITLE OF THIS WORK ▼**  
BUILD\_TOOLS/RULES.MK (V.1.1)

REGISTERED OF COPYRIGHTS

United States of America

PREVIOUS OR ALTERNATIVE TITLES ▼

**PUBLICATION AS A CONTRIBUTION** If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work ▼**

If published in a periodical or serial give: Volume ▼

Number ▼

Issue Date ▼

On Pages ▼

2

**NAME OF AUTHOR ▼**

Alcatel USA, Inc.

**DATES OF BIRTH AND DEATH**

Year Born ▼

Year Died ▼

Was this contribution to the work a  
"work made for hire"? ☒ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**

Name of Country

OR

Citizen of ▶

Domiciled in ▶ U.S.A.

**WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK**Anonymous? ☐ Yes ☒ NoPseudonymous? ☐ Yes ☒ No

If the answer to either  
of these questions is  
"Yes," see detailed  
instructions.

**NATURE OF AUTHORSHIP**

Computer Program

Briefly describe nature of material created by this author in which copyright is claimed. ▼

**NAME OF AUTHOR ▼****DATES OF BIRTH AND DEATH**

Year Born ▼

Year Died ▼

Was this contribution to the work a  
"work made for hire"? ☐ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**

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Citizen of ▶

Domiciled in ▶

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Domiciled in ▶

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If the answer to either  
of these questions is  
"Yes," see detailed  
instructions.

**NATURE OF AUTHORSHIP**

Briefly describe nature of material created by this author in which copyright is claimed. ▼

3

**YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED**

1996

This information  
must be given  
in all cases.

**DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK**

Complete this information  
ONLY if this work  
has been published.

Month ▶

Day ▶

Year ▶

Nation

4

**COPYRIGHT CLAIMANT(S)** Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

**TRANSFER** If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED  
MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

DO NOT WRITE HERE  
OFFICE USE ONLY

MORE ON BACK ▶

• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.  
• See detailed instructions.

• Sign the form at line 8.

DO NOT WRITE HERE

Page 1 of 2 pages

## NOTE

Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

EXAMINED BY <u>AP</u>	FORM TX
CHECKED BY _____	
<input type="checkbox"/> CORRESPONDENCE Yes	FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼a. ☐ This is the first published edition of a work previously registered in unpublished form.b. ☐ This is the first application submitted by this author as copyright claimant.c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

## DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

a 6

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

b See instructions before completing this space.

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

a 7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent: Name/Address/Apt/City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

b

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

Email ►

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

☐ author☐ other copyright claimant☐ owner of exclusive right(s)☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address:

Name ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 8

9

1. Application form  
2. Nonrefundable filing fee in check or money order As of July 1, 1999,  
payable to Register of Copyrights  
3. Deposit materialLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

the filing fee for Form TX is \$30.

\*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

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*Marybeth Peters*

**FORM 1X**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE  
RE

TXu 909-303



EFFECTIVE DATE OF REGISTRATION

5 5 00

Month Day Year

1

TITLE OF THIS WORK ▼

BUILD\_TOOLS/WHIP.PL (V.1.1)

United States of America

ATE CONTINUATION SHEET.

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼

Number ▼

Issue Date ▼

On Pages ▼

2

NAME OF AUTHOR ▼

Alcatel USA, Inc.

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE  
Name of Country

OR Citizen of ▼

Domiciled in ▼ U.S.A.

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☒ No

Pseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

NOTE

Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

NATURE OF AUTHORSHIP Computer Program

Briefly describe nature of material created by this author in which copyright is claimed. ▼

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a "work made for hire"?  
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☐ No

AUTHOR'S NATIONALITY OR DOMICILE  
Name of Country

OR Citizen of ▼

Domiciled in ▼

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Year Born ▼

Year Died ▼

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☐ No

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Name of Country

OR Citizen of ▼

Domiciled in ▼

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Pseudonymous? ☐ Yes ☐ No

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NATURE OF AUTHORSHIP

Briefly describe nature of material created by this author in which copyright is claimed. ▼

3

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED

1995

This information must be given in all cases.

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month ▼

Day ▼

Year ▼

Nation

4

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED

MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
- See detailed instructions.
- Sign the form at line 8.

DO NOT WRITE HERE  
Page 1 of 2 pages

EXAMINED BY <u>                    </u>	FORM TX
CHECKED BY <u>                    </u>	
<input type="checkbox"/> CORRESPONDENCE	FOR
Yes	COPYRIGHT
	OFFICE
	USE
	ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼a. ☐ This is the first published edition of a work previously registered in unpublished form.b. ☐ This is the first application submitted by this author as copyright claimant.c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

## DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

a

6

See instructions before completing this space.

b

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

a

7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

b

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

Email ►

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

☐ author☐ other copyright claimant☐ owner of exclusive right(s)☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address:

Name ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 8

9

1. Application form  
2. Nonrefundable filing fee in check or money order payable to *Register of Copyrights*  
3. Deposit materialLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

As of July 1, 1999, the filing fee for Form TX is \$30.

\*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.  
June 1999-200,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

## CERTIFICATE OF REGISTRATION

**FORM TX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE

RI

TXu 909-304



TX IXU  
EFFECTIVE DATE OF REGISTRATION

5 5 00  
Month Day Year



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

REGISTER OF COPYRIGHTS **ATE CONTINUATION SHEET.**

1

**TITLE OF THIS WORK ▼**  
APU/AXM/MAKEFILE (V.1.9)

United States of America

**PREVIOUS OR ALTERNATIVE TITLES ▼**

**PUBLICATION AS A CONTRIBUTION** If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work ▼**

If published in a periodical or serial give: **Volume ▼** **Number ▼** **Issue Date ▼** **On Pages ▼**

2

**NAME OF AUTHOR ▼**

Alcatel USA, Inc.

**DATES OF BIRTH AND DEATH**

Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**

Name of Country

OR { Citizen of ▼  
Domiciled in ▼ U.S.A.

**WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK**

Anonymous? ☐ Yes ☒ No  
Pseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

**NATURE OF AUTHORSHIP** Briefly describe nature of material created by this author in which copyright is claimed. ▼  
Revised Computer Program

**NAME OF AUTHOR ▼****DATES OF BIRTH AND DEATH**

Year Born ▼ Year Died ▼

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3

**YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED**

1998

This information must be given in all cases.

**DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK**

Complete this information ONLY if this work has been published. Month ▼ Day ▼ Year ▼

Nation

4

**COPYRIGHT CLAIMANT(S)** Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

**TRANSFER** If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED

MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

**MORE ON BACK ▶**

• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.  
• See detailed instructions.  
• Sign the form at line 8.

**DO NOT WRITE HERE**

Page 1 of 2 pages

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See instructions before completing this space.

DO NOT WRITE HERE OFFICE USE ONLY



EXAMINED BY <i>7/6</i>	FORM TX
CHECKED BY	
<input type="checkbox"/> CORRESPONDENCE Yes	FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼a. ☐ This is the first published edition of a work previously registered in unpublished form.b. ☐ This is the first application submitted by this author as copyright claimant.c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

## DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

APU/AXM/MAKEFILE (V.1.1)

a 6

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

Additional Code

See instructions  
before completing  
this space.

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

a 7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt./City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

b

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

Email ►

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

☐ author☐ other copyright claimant☐ owner of exclusive right(s)☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ▼  
V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 81. Application form  
2. Nonrefundable filing fee in check or money order As of  
payable to Register of Copyrights July 1,  
3. Deposit material 1999,  
the  
filing  
fee for  
Form TX  
is \$30.Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

9

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*Marybeth Peters*

FORM TX

For  
UN  
RE:

TXu 909-305



TXU0009093054

TX  
EFFECTIVE DATE OF REGISTRATION

5 5 00  
Month Day Year

ATE CONTINUATION SHEET.

1

OFFICIAL SEAL

TITLE OF THIS WORK ▼

BUILD\_TOOLS/TARGETS.MK (V.1.22)

United States of America

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2

a

NAME OF AUTHOR ▼

Alcatel USA, Inc.

DATES OF BIRTH AND DEATH

Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ▼

Domiciled in ▼ U.S.A.

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Revised Computer Program

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Domiciled in ▼

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3

a

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED

1998

This information must be given in all cases.

b

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month ▼

Day ▼

Year ▼

Nation

4

See instructions before completing this space.

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED

MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ▶

• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.  
• See detailed instructions.  
• Sign the form at line 8.

DO NOT WRITE HERE

Page 1 of 2 pages

EXAMINED BY <i>AK</i>	FORM TX
CHECKED BY	
<input type="checkbox"/> CORRESPONDENCE Yes	FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

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b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

### DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

BUILD\_TOOLS/TARGETS.MK (V.1.1)

a 6

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

See instructions  
before completing  
this space.

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

a 7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

b

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

- ☐ author  
☐ other copyright claimant  
☐ owner of exclusive right(s)  
☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:

Name ▼  
V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

- Complete all necessary spaces  
• Sign your application in space 8

1. Application form  
2. Nonrefundable filing fee in check or money order payable to Register of Copyrights  
3. Deposit material

Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

As of  
July 1,  
1999,  
the  
filing  
fee for  
Form TX  
is \$30.

9

\*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.  
June 1999—200,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

EXAMINED BY <u>                    </u>	FORM TX
CHECKED BY <u>                    </u>	
<input type="checkbox"/> CORRESPONDENCE	FOR
Yes	COPYRIGHT
	OFFICE
	USE
	ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼

a. ☐ This is the first published edition of a work previously registered in unpublished form.

b. ☐ This is the first application submitted by this author as copyright claimant.

c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

#### DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

BUILD\_TOOLS/MAKEFILE (V.1.1)

a

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See instructions  
before completing  
this space.

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Name ▼

Account Number ▼

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V. Lawrence Sewell

Date ►

May 4, 2000

Handwritten signature (X) ▼

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Alcatel USA, Inc.

Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 6

1. Application form  
2. Nonrefundable filing fee in check or money order As of  
payable to Register of Copyrights July 1,  
3. Deposit material 1999,

the  
Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000  
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Form TX  
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June 1999—200,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

EXAMINED BY <u>HC</u>	FORM TX
CHECKED BY _____	
<input type="checkbox"/> CORRESPONDENCE	FOR
Yes	COPYRIGHT
	OFFICE
	USE
	ONLY

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Year of Registration ►

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BUILD\_TOOLS/DEFINES.MK (V.1.1)

a

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Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

Additional Code

See instructions before completing this space.

b

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Name ▼

Account Number ▼

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Alcatel USA, Inc.

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Plano, TX 75075

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V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

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Name ▼  
V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
Number/Street/Apt ▼  
1000 Coit Road  
City/State/ZIP ▼  
Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 8

1. Application form  
2. Nonrefundable filing fee in check or money order As of July 1, 1999,  
payable to Register of Copyrights  
3. Deposit material the filing fee for Form TX is \$30.

Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

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June 1999—200,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

FORM TX

TXu 909-308



#TXU909308#

## CERTIFICATE OF REGISTRATION



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

TX TXU  
EFFECTIVE DATE OF REGISTRATION

Month Day Year  
5 5 00

ATE CONTINUATION SHEET.

1

OFFICIAL SEAL

TITLE OF THIS WORK ▼

United States of America

BUILD\_TOOLS/RULES.MK (V.1.12)

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2

a

NAME OF AUTHOR ▼

Alcatel USA, Inc.

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ▼

Domiciled in ▼ U.S.A.

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☒ NoPseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

## NOTE

Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

b

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a "work made for hire"?  
☐ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ▼

Domiciled in ▼

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☐ NoPseudonymous? ☐ Yes ☐ No

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NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

c

NAME OF AUTHOR ▼

DATES OF BIRTH AND DEATH

Year Born ▼

Year Died ▼

Was this contribution to the work a "work made for hire"?  
☐ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ▼

Domiciled in ▼

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NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼

3

a

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED

1998

This information must be given in all cases.

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month ▼

Day ▼

Year ▼

Nation ▼

4

See instructions before completing this space.

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

DO NOT WRITE HERE OFFICE USE ONLY

APPLICATION RECEIVED

MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

MORE ON BACK ►

- Complete all applicable spaces (numbers 5-9) on the reverse side of this page.
- See detailed instructions.
- Sign the form at line 8.

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Page 1 of 2 pages

# CERTIFICATE OF REGISTRATION



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*Marybeth Peters*

**FORM TX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE  
REGIST

TXu 909-307



EFFECTIVE DATE OF REGISTRATION

5 5 00  
Month Day Year

1

OFFICIAL SEAL REGISTER OF COPYRIGHTS DATE CONTINUATION SHEET.

TITLE OF THIS WORK ▼

BUILD\_TOOLS/DEFINES.MK (V.1.35)

United States of America

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼

Number ▼

Issue Date ▼

On Pages ▼

2

a

NAME OF AUTHOR ▼

Alcatel USA, Inc.

DATES OF BIRTH AND DEATH  
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"? ☒ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE  
Name of Country

OR { Citizen of ▼ Domiciled in ▼ U.S.A.

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☒ No Pseudonymous? ☐ Yes ☒ No

If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. Revised Computer Program

NAME OF AUTHOR ▼

b

Was this contribution to the work a "work made for hire"? ☐ Yes ☐ No

AUTHOR'S NATIONALITY OR DOMICILE  
Name of Country

OR { Citizen of ▼ Domiciled in ▼

DATES OF BIRTH AND DEATH  
Year Born ▼ Year Died ▼

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NAME OF AUTHOR ▼

c

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Name of Country

OR { Citizen of ▼ Domiciled in ▼

DATES OF BIRTH AND DEATH  
Year Born ▼ Year Died ▼

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NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed.

3

a

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED

1998

This information must be given in all cases.

b

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month Day Year

Nation

4

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Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

TRANSFER If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED

MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

DO NOT WRITE HERE OFFICE USE ONLY

MORE ON BACK ▶

• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.  
• See detailed instructions.  
• Sign the form at line 8.

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Page 1 of 2 pages

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*Marybeth Peters*

**FORM TX**  
For a Nondramatic Literary Work  
UNIT  
REG

TXu 909-306



TX (TXU)  
EFFECTIVE DATE OF REGISTRATION

5 5 00

Month Day Year

NOTE CONTINUATION SHEET.

1

OFFICIAL SEAL TITLE OF THIS WORK ▼

BUILD\_TOOLS/MAKEFILE (V.1.26)

United States of America

PREVIOUS OR ALTERNATIVE TITLES ▼

PUBLICATION AS A CONTRIBUTION If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2

a NAME OF AUTHOR ▼  
Alcatel USA, Inc.

DATES OF BIRTH AND DEATH  
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE  
Name of Country  
OR { Citizen of ▼  
Domiciled in ▼ U.S.A.

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK  
Anonymous? ☐ Yes ☒ No  
Pseudonymous? ☐ Yes ☒ No  
If the answer to either of these questions is "Yes," see detailed instructions.

NATURE OF AUTHORSHIP Briefly describe nature of material created by this author in which copyright is claimed. ▼  
Revised Computer Program

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Domiciled in ▼

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Complete this information ONLY if this work has been published.  
Month ▼ Day ▼ Year ▼ Nation ▼

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Plano, TX 75075

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DO NOT WRITE HERE  
Page 1 of 2 pages



EXAMINED BY <u>                    </u>	FORM TX
CHECKED BY <u>                    </u>	
<input type="checkbox"/> CORRESPONDENCE	FOR
<input type="checkbox"/> Yes	COPYRIGHT
	OFFICE
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	ONLY

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BUILD\_TOOLS/RULES.MK (V.1.1)

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Fax number ► 972-477-9328

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Date ► May 4, 2000

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Number/Street/Apt ▼

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City/State/ZIP ▼

Plano, TX 75075

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3. Deposit material

Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

**9**

As of July 1, 1999, the filing fee for Form TX is \$30.

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June 1999—200,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

## CERTIFICATE OF REGISTRATION

**FORM TX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE

REGISTRATION NUMBER

TXu 909-309



EFFECTIVE DATE OF REGISTRATION

5 5 00  
Month Day Year



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

REGISTER OF COPYRIGHTS AND CONTINUATION SHEET.

1

TITLE OF THIS WORK ▼

United States of America

BUILD\_TOOLS/WHIPSOURCE.PL (V.1.3)

PREVIOUS OR ALTERNATIVE TITLES ▼

**PUBLICATION AS A CONTRIBUTION** If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. Title of Collective Work ▼

If published in a periodical or serial give: Volume ▼ Number ▼ Issue Date ▼ On Pages ▼

2

NAME OF AUTHOR ▼

Alcatel USA, Inc.

DATES OF BIRTH AND DEATH

Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

AUTHOR'S NATIONALITY OR DOMICILE

Name of Country

OR { Citizen of ▼ Domiciled in ▼ U.S.A.

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☒ NoPseudonymous? ☐ Yes ☒ No

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Revised Computer Program

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Name of Country

OR { Citizen of ▼ Domiciled in ▼

WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK

Anonymous? ☐ Yes ☐ NoPseudonymous? ☐ Yes ☐ No

If the answer to either of these questions is "Yes," see detailed instructions.

**NATURE OF AUTHORSHIP** Briefly describe nature of material created by this author in which copyright is claimed. ▼

## NOTE

Under the law, the "author" of a "work made for hire" is generally the employer, not the employee (see instructions). For any part of this work that was "made for hire" check "Yes" in the space provided, give the employer (or other person for whom the work was prepared) as "Author" of that part, and leave the space for dates of birth and death blank.

3

YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED

1998

This information must be given in all cases.

DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK

Complete this information ONLY if this work has been published.

Month ▼ Day ▼ Year ▼

Nation

4

COPYRIGHT CLAIMANT(S) Name and address must be given even if the claimant is the same as the author given in space 2. ▼

Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

**TRANSFER** If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED

MAY 05 2000

ONE DEPOSIT RECEIVED

MAY 05 2000

TWO DEPOSITS RECEIVED

FUNDS RECEIVED

DO NOT WRITE HERE OFFICE USE ONLY

MORE ON BACK ▶

• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.  
• See detailed instructions.  
• Sign the form at line 8.

DO NOT WRITE HERE

Page 1 of 2 pages

EXAMINED BY <i>he</i>	FORM TX
CHECKED BY	
<input type="checkbox"/> CORRESPONDENCE	FOR
<input type="checkbox"/> Yes	COPYRIGHT
	OFFICE
	USE
	ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼a. ☐ This is the first published edition of a work previously registered in unpublished form.b. ☐ This is the first application submitted by this author as copyright claimant.c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

## DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

BUILD\_TOOLS/WHIPSOURCE.PL (V.1.1)

a 6

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

Additional Code

See instructions before completing this space.

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account. Name ▼ Account Number ▼

a 7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt./City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

Email ►

b

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

☐ author☐ other copyright claimant☐ owner of exclusive right(s)☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate will be mailed in window envelope to this address:

Name ▼  
V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
Number/Street/Apt ▼  
1000 Coit Road  
City/State/ZIP ▼  
Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 8

9

1. Application form  
2. Nonrefundable filing fee in check or money order As of July 1, 1999, the filing fee for Form TX is \$30.  
3. Deposit material

Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

\*17 U.S.C. § 506(a): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.  
June 1999—200,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

## CERTIFICATE OF REGISTRATION

**FORM TX**  
For a Nondramatic Literary Work  
UNITED STATES COPYRIGHT OFFICE

R TXu 909-300  
EFFECTIVE DATE OF REGISTRATION  
5 5 00  
Month Day Year



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

1

OFFICIAL SEAL

**TITLE OF THIS WORK ▼**  
BUILD\_TOOLS/WHIP.PL (V.1.3)

REGISTERED OF COPYRIGHTS **DATE CONTINUATION SHEET.**

United States of America

**PREVIOUS OR ALTERNATIVE TITLES ▼**

**PUBLICATION AS A CONTRIBUTION** If this work was published as a contribution to a periodical, serial, or collection, give information about the collective work in which the contribution appeared. **Title of Collective Work ▼**

If published in a periodical or serial give: **Volume ▼** **Number ▼** **Issue Date ▼** **On Pages ▼**

2

**a NAME OF AUTHOR ▼**  
Alcatel USA, Inc.

**DATES OF BIRTH AND DEATH**  
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☒ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**  
Name of Country  
OR { Citizen of ▼  
Domiciled in ▼ U.S.A.

**WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK**  
Anonymous? ☐ Yes ☒ No  
Pseudonymous? ☐ Yes ☒ No  
If the answer to either of these questions is "Yes," see detailed instructions.

**NATURE OF AUTHORSHIP** Briefly describe nature of material created by this author in which copyright is claimed. **Revised Computer Program**

**b NAME OF AUTHOR ▼**

**DATES OF BIRTH AND DEATH**  
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☐ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**  
Name of Country  
OR { Citizen of ▼  
Domiciled in ▼

**WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK**  
Anonymous? ☐ Yes ☐ No  
Pseudonymous? ☐ Yes ☐ No  
If the answer to either of these questions is "Yes," see detailed instructions.

**NATURE OF AUTHORSHIP** Briefly describe nature of material created by this author in which copyright is claimed. ▼

**c NAME OF AUTHOR ▼**

**DATES OF BIRTH AND DEATH**  
Year Born ▼ Year Died ▼

Was this contribution to the work a "work made for hire"?  
☐ Yes  
☐ No

**AUTHOR'S NATIONALITY OR DOMICILE**  
Name of Country  
OR { Citizen of ▼  
Domiciled in ▼

**WAS THIS AUTHOR'S CONTRIBUTION TO THE WORK**  
Anonymous? ☐ Yes ☐ No  
Pseudonymous? ☐ Yes ☐ No  
If the answer to either of these questions is "Yes," see detailed instructions.

**NATURE OF AUTHORSHIP** Briefly describe nature of material created by this author in which copyright is claimed. ▼

3

**a YEAR IN WHICH CREATION OF THIS WORK WAS COMPLETED**  
1998  
This information must be given in all cases.

**b DATE AND NATION OF FIRST PUBLICATION OF THIS PARTICULAR WORK**  
Complete this information ONLY if this work has been published.  
Month ▼ Day ▼ Year ▼

4

**COPYRIGHT CLAIMANT(S)** Name and address must be given even if the claimant is the same as the author given in space 2. ▼  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

**TRANSFER** If the claimant(s) named here in space 4 is (are) different from the author(s) named in space 2, give a brief statement of how the claimant(s) obtained ownership of the copyright. ▼

APPLICATION RECEIVED  
MAY 05 2000  
ONE DEPOSIT RECEIVED  
MAY 05 2000  
TWO DEPOSITS RECEIVED

FUNDS RECEIVED

**MORE ON BACK ▼**  
• Complete all applicable spaces (numbers 5-9) on the reverse side of this page.  
• See detailed instructions.  
• Sign the form at line 8.

**DO NOT WRITE HERE**  
Page 1 of 2 pages

See instructions before completing this space.

DO NOT WRITE HERE  
OFFICE USE ONLY

EXAMINED BY <i>JS</i>	FORM TX
CHECKED BY	
<input type="checkbox"/> CORRESPONDENCE Yes	FOR COPYRIGHT OFFICE USE ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

PREVIOUS REGISTRATION Has registration for this work, or for an earlier version of this work, already been made in the Copyright Office?

☐ Yes ☒ No If your answer is "Yes," why is another registration being sought? (Check appropriate box.) ▼a. ☐ This is the first published edition of a work previously registered in unpublished form.b. ☐ This is the first application submitted by this author as copyright claimant.c. ☐ This is a changed version of the work, as shown by space 6 on this application.

If your answer is "Yes," give: Previous Registration Number ►

Year of Registration ►

5

## DERIVATIVE WORK OR COMPILATION

Preexisting Material Identify any preexisting work or works that this work is based on or incorporates. ▼

BUILD\_TOOLS/WHIP.PL (V.1.1)

a

6

Material Added to This Work Give a brief, general statement of the material that has been added to this work and in which copyright is claimed. ▼

Additional Code

See instructions  
before completing  
this space.

b

DEPOSIT ACCOUNT If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name ▼

Account Number ▼

a

7

CORRESPONDENCE Give name and address to which correspondence about this application should be sent. Name/Address/Apt/City/State/ZIP ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

b

Area code and daytime telephone number ► 972-519-3735

Fax number ► 972-477-9328

Email ►

CERTIFICATION\* I, the undersigned, hereby certify that I am the

Check only one ►

☐ author☐ other copyright claimant☐ owner of exclusive right(s)☒ authorized agent of Alcatel USA, Inc.

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

8

Typed or printed name and date ▼ If this application gives a date of publication in space 3, do not sign and submit it before that date.

V. Lawrence Sewell

Date ► May 4, 2000

Handwritten signature (X) ▼

X

Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:

Name ▼

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

Number/Street/Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in space 81. Application form  
2. Nonrefundable filing fee in check or money order As of  
payable to Register of Copyrights July 1,  
3. Deposit material 1999,  
the  
filing  
fee for  
Form TX  
is \$30.Library of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20559-6000

9

\*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

June 1999—200,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 1999-454-879/49

MAY 24 2000

FUNDS RECEIVED DATE

MAY 24 20

EXAMINED BY *[Signature]*CORRESPONDENCE ☐REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

D

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) 972 - 519-3735 Fax (972) 477-9328 Email

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

☒ author☐ owner of exclusive right(s)☐ other copyright claimant☐ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) &amp;

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ V. Lawrence Sewell

Date ▼ 5/23/2000

Handwritten signature (X) ▼ *V. Lawrence Sewell*Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ▼ V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
Number/Street/Apt ▼  
1000 Coit Road  
City/State/ZIP ▼  
Plano, TX 75075\* Complete all necessary spaces  
\* Sign your application in Space F1. Application form  
2. Nonrefundable filing fee in check or  
money order payable to Registrar of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-4001As of July 1,  
1998, the fee  
for filing Form  
CA is \$45.

\*17 U.S.C. § 506(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

February 2000—40,000  
WEB REV: June 1999

♻️ PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 2000-481-113/107

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PMB Document 1 Filed 06/01/00 Page 1 of 1

FORM CA

For Supplementary Registration # 71  
UNITED STATES COPYRIGHT OFFICE



This Certificate is issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

TXu 909-337  
XXXXXXXXXXXX

TX TXU PA PAU VA VAL SR SRU RE  
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

OFFICIAL SEAL REGISTER OF COPYRIGHTS

A

Title of Work ▼ <b>APU/AXH/MAKEFILE (V.1.1)</b>	
Registration Number of the Basic Registration ▼ <b>TXu 909-297</b>	Year of Basic Registration ▼ <b>2000</b>
Name(s) of Author(s) ▼ <b>Alcatel USA, Inc.</b>	Name(s) of Copyright Claimant(s) ▼ <b>Alcatel USA, Inc.</b>

B

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2a; 4; 4** Line Heading or Description **Name of author; Copyright claimant; Transfer**

Incorrect Information as it Appears in Basic Registration ▼  
**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼  
**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼  
**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

C

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK** • Complete all applicable spaces (D-G) on the reverse side of this page.  
• See detailed instructions. • Sign the form at Space F.

DO NOT WRITE HERE  
Page 1 of 2 pages

MAY 24 2000  
FUNDS RECEIVED DATE

MAY 24 2000

EXAMINED BY *JA*CORRESPONDENCE ☐FOR  
COPYRIGHT  
OFFICE  
USE  
ONLYREFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NO

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

D

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) 972 - 519-3735 Fax (972) 477-9328 Email

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification<sup>1</sup> I, the undersigned, hereby certify that I am the: (Check only one)☒ author ☐ owner of exclusive right(s) ☐ other copyright claimant ☒ duly authorized agent of Alcatel USA Sourcing, L.P. by Alcatel USA GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ V. Lawrence Sewell

Date ▼ 5/23/2000

Handwritten signature (X) ▼ *V. Lawrence Sewell*Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ▼ V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.

Number/Street Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

• Complete all necessary spaces  
• Sign your application in Space F1. Application form  
2. Nonrefundable filing fee in check or  
money order payable to Registrar of  
CopyrightLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-4000As of July 1,  
1999, the fee  
for filing Form  
CA is \$65.<sup>1</sup>17 U.S.C. § 508(a): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.February 2000—440 000  
WE © REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 2000-481-113/107



# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Page 73 of 100 PageID #: 73



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

For Supplementary Registration  
UNITED STATES COPYRIGHT OFFICE  
REC

TXu 909-338



TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE
----	-----	----	-----	----	-----	----	-----	----

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

OFFICIAL SEAL OF THE UNITED STATES COPYRIGHT OFFICE REGISTER OF COPYRIGHTS CONTINUATION SHEET.

**A**

Title of Work ▼

**BUILD\_TOOLS/MAKEFILE (V.1.1)**

Registration Number of the Basic Registration ▼

**TKu 909-298**

Year of Basic Registration ▼

**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2a; 4; 4**

Line Heading or Description **Name of author; Copyright claimant; Transfe**

Incorrect Information as It Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number

Line Heading or Description

Amplified Information and Explanation of Information ▼

**MORE ON BACK ▶**

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

**DO NOT WRITE HERE**

Page 1 of 2 pages

TXu 909-336



TX	TX	PA	PAU	VA	VAU	SR	SRU	RE
----	----	----	-----	----	-----	----	-----	----

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

OFFICIAL USE: WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE SEPARATE CONTINUATION SHEET.

Title of Work ▼

BUILD\_TOOLS/DEFINES.MK (V.1.1)

Registration Number of the Basic Registration ▼

TXu 909-296

Year of Basic Registration ▼

2000

Name(s) of Author(s) ▼

Alcatel USA, Inc.

Name(s) of Copyright Claimant(s) ▼

Alcatel USA, Inc.

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a; 4; 4

Line Heading or Description Name of author; Copyright claimant; Transfe

Incorrect Information as it Appears in Basic Registration ▼

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)

Corrected Information ▼

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction ▼

To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number Line Heading or Description

Amplified Information and Explanation of Information ▼

MORE ON BACK ►

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

DO NOT WRITE HERE

Page 1 of 2 pages

MAY 24 2000  
FUNDS RECEIVED DATE  
MAY 24 2000EXAMINED BY                     CORRESPONDENCE ☐REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

Phone ( ) Fax (972) 477-9328 Email

972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author☐ owner of exclusive right(s)☐ other copyright claimant☒ duly authorized agent of

Alcatel USA Sourcing, L.P. by Alcatel USA

GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) ▲

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼

V. Lawrence Sewell

Date ▼

5/23/2000

Handwritten signature (X) ▼

*V. Lawrence Sewell*Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:

Name ▼ V. Lawrence Sewell

Alcatel USA, Inc.

Number/Street Apt ▼

1000 Coit Road

City/State/ZIP ▼

Plano, TX 75075

\* Complete all necessary spaces.  
\* Sign your application in Space 71. Application form  
2. Nonreturnable filing fee in cash or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0000As of July 1,  
1999, the fee  
for filing Form  
CA is \$45.

\*17 U.S.C. § 505(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 409, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

February 2000-40,000  
WEB REV: June 1999

PROVIDED ON SECTICLES PAPER

U.S. GOVERNMENT PRINTING OFFICE: 2000-401-113/107

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Page 76 of 76

For Supplementary Registration  
UNITED STATES COPYRIGHT OFFICE  
REGISTRATION



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Margybeth Peters*

TXu 909-339  
XXXXXXXXXXXX

TX TXU PA PAU VA VAU SR SRU RE  
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

OFFICIAL USE: PRINT ABOVE THIS LINE IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

**A**

Title of Work ▼  
**BUILD\_TOOLS/TARGETS.MK (V.1.1)**

Registration Number of the Basic Registration ▼

**TXu 909-299**

Year of Basic Registration ▼

**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2A: 4: 4** Line Heading or Description **Name of author; Copyright claimant; Transfer**

Incorrect Information as It Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK ▶**

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

**DO NOT WRITE HERE**

Page 1 of 1 pages

MAY 24 2000  
FUNDS RECEIVED DATE

MAY 24 2000

EXAMINED BY

CORRESPONDENCE ☒REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part CCorrespondence: Give name and address to which correspondence about this application should be sent.  
V. Lawrence Sewell, Esq.Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) 972 - 519-3735 Fax (972) 477-9328 Email

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

☒ author ☐ owner of exclusive right(s) ☐ other copyright claimant ☒ duly authorized agent of Alcatel USA Sourcing, L.P. by Alcatel USA GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s) ☐  
of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.Typed or printed name ☒ V. Lawrence Sewell Date ☒ 5/23/2000Handwritten signature (DO NOT SIGN) ☒ V. Lawrence SewellCertificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ☒ V. Lawrence Sewell  
Alcatel USA, Inc.  
Number/Street/Box ☒  
1000 Coit Road  
City/State/ZIP ☒  
Plano, TX 75075\* Complete all necessary spaces.  
\* Sign your application in Space P1. Application form  
2. Nonrefundable filing fee in check or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-4001As of July 1,  
1998, the fee  
for filing Form  
CA is \$35.

\*17 U.S.C. § 508(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

February 2000-40,000  
WEB REV: June 1999

PRINTED ON RECYCLED PAPER

U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/107

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00

Page 78 of 100 PageID #: 78

UNITED STATES COPYRIGHT OFFICE  
REGIS

TXu 909-340



TX TXU PA PAU VA VAU SA SRU RE  
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

## REGISTER OF COPYRIGHTS STATE CONTINUATION SHEET.

United States of America

**A**

Title of Work  
**BUILD\_TOOLS/WHIP.PL (V.1.3)**

Registration Number of the Basic Registration  
**TXu 909-300**

Year of Basic Registration  
**2000**

Name(s) of Author(s)  
**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s)  
**Alcatel USA, Inc.**

**B**

### Location and Nature of Incorrect Information in Basic Registration

Line Number 2a; 4; 6 Line Heading or Description Name of author; Copyright claimant; Transfer  
Incorrect Information as it Appears in Basic Registration

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

### Corrected Information

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

### Explanation of Correction

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

### Location and Nature of Information in Basic Registration to be Amplified

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

### Amplified Information and Explanation of Information

**MORE ON BACK**

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

**DO NOT WRITE HERE**

Page 1 of 7 pages

FORM CA RECEIVED

MAY 24 2000

EXAMINED BY

CORRESPONDENCE Q

REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) Fax (972) 477-9328 Email

972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification<sup>a</sup> I, the undersigned, hereby certify that I am the: (Check only one)☒ author ☐ owner of exclusive right(s)  
☐ other copyright claimant ☐ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s) ☒  
of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ V. Lawrence Sewell

Date ▼ 5/23/2000

Handwritten signature (X) ▼

Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ▼ V. Lawrence Sewell  
Alcatel USA, Inc.Number/Street/Apt ▼  
1000 Coit RoadCity/State/ZIP ▼  
Plano, TX 75075• Complete all necessary spaces  
• Sign your application in Space 91. Application fee  
2. Non-refundable filing fee in cash or  
money order payable to Register of  
CopyrightsLibrary or Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-4040As of July 1,  
1995, the fee  
for filing Form  
CA is \$35.<sup>a</sup> 17 U.S.C. § 506(c): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.February 2000—40,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-461-112/187

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00 Page 80 of 80 Page ID #: 80



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

TX TXU PA PAU VA VAU SR SRU RE

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

## REGISTER OF COPYRIGHTS CONTINUATION SHEET.

United States of America

**A**

Title of Work ▼

**BUILD\_TOOLS/RULES.MK (V.1.1)**

Registration Number of the Basic Registration ▼

**TXU 909-301**

Year of Basic Registration ▼

**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2a; 4; 4**

Line Heading or Description **Name of author; Copyright claimant; Transfer**

Incorrect Information as it Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK ►**

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

**DO NOT WRITE HERE**

Page 1 of 2 pages



MAY 24 2000  
FUNDS RECEIVED DATE

MAY 24 2000

EXAMINED BY 2CORRESPONDENCE ☐REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) 972 - 519-3735 Fax (972) 477-9328 Email

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.  
Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

- ☒
- author
- ☐
- owner of exclusive right(s)
- 
- ☐
- other copyright claimant
- ☐
- duly authorized agent of

Alcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s) ☒

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ☒ V. Lawrence SewellDate ☒ 5/23/2000Handwritten signature ☒ V. Lawrence SewellCertificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ☒ V. Lawrence Sewell

Alcatel USA, Inc.

Number/Street/Apt ☒

1000 Coit Road

City/State/ZIP ☒

Plano, TX 75075

\* Complete all necessary spaces  
\* Sign your application in Space P1. Application fee  
2. If needed, the fee to be checked or  
money order payable to Registrar of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0000As of July 1,  
1998, the fee  
for filing Form  
CA is \$35.

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February 2000—48,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/107

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00159-PNB Document 1 Filed 06/01/00 Page 82 of 100 Page ID # 82

For Supplementary Registration  
UNITED STATES COPYRIGHT OFFICE  
REQUIREMENTS



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

TXu 909-342  
XXXXXXXXXXXX

TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION								
MAY 24 2000								
Month			Day			Year		

OFFICIAL SEAL

REGISTER OF COPYRIGHTS

United States of America

**A**

Title of Work ▼

**BUILD\_TOOLS/WHIPSOURCE.PL (V.1.1)**

Registration Number of the Basic Registration ▼

**TXu 909-302**

Year of Basic Registration ▼

**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2a; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfer

Incorrect Information as it Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK ▶**

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

**DO NOT WRITE HERE**  
Page 1 of 2 pages

MAY 24 2000  
FUNDS RECEIVED DAY

MAY 24 2000

EXAMINED BY *SK*CORRESPONDENCE ☐REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.

Alcatel USA, Inc.

1000 Coit Road

Plano, TX 75075

Phone ( ) Fax (972) 477-9328 Email

972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification<sup>1</sup> I, the undersigned, hereby certify that I am the: (Check only one)☐ author☐ owner of exclusive right(s)☐ other copyright claimant☐ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s) ☒

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ☒ V. Lawrence SewellDate ☒ 5/23/2000Handwritten signature ☒ *V. Lawrence Sewell*Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ☒ V. Lawrence Sewell  
Alcatel USA, Inc.Number/Street/Apt ☒  
1000 Coit RoadCity/State/ZIP ☒  
Plano, TX 75075• Complete all necessary sections  
• Sign your application in § 505(c) F1. Application form  
2. Nonrefundable filing fee in cash or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0001As of July 1,  
1995, the fee  
for filing Form  
CA is \$44.<sup>1</sup> 17 U.S.C. § 505(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$2,000.February 2000—40,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-461-112/107

# CERTIFICATE OF REGISTRATION

Document 1 Filed 06/01/00

For Supplementary Registration  
Page 1 of 2  
Page 1 of 2



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

TXu 909-343

1  
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION  
MAY 24 2000

Month Day Year

OFFICIAL-551 REGISTER OF COPYRIGHTS SEPARATE CONTINUATION SHEET.

**A**

Title of Work ▼

**BUILD TOOLS/WHIP.PL (V.1.1)**

Registration Number of the Basic Registration ▼

**TXu 909-303**

Year of Basic Registration ▼

**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2a; 4; 4** Line Heading or Description **Name of author; Copyright claimant; Transfer**

Incorrect Information as It Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK ►**

• Complete all applicable spaces (D-G) on the reverse side of this page.  
• See detailed instructions. • Sign the form at Space F.

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Page 1 of 2 pages

FORM CA RECEIVED

MAY 24 2000

EXAMINED BY *[Signature]*CORRESPONDENCE ☒REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

D

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road.  
Plano, TX 75075

Phone ( ) Fax (972) 477-9328 Email

972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

- ☐
- author
- ☐
- owner of exclusive right(s)
- 
- ☐
- other copyright claimant
- ☐
- duly authorized agent of

Alcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s) ☒  
of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.Typed or printed name ☒ V. Lawrence SewellDate ☒ 5/23/2000Handwritten signature (X) ☒*[Handwritten Signature]*Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ☒ V. Lawrence Sewell  
Alcatel USA, Inc.Number/Street/Apt ☒  
1000 Coit RoadCity/State/ZIP ☒  
Plano, TX 75075• Complete all necessary spaces.  
• Sign your application in Space 91. Appropriate form  
2. Nonrefundable filing fee in check or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0001

G

As of July 1,  
1999, the fee  
for filing Form  
CA is \$35.

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February 2000—40,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/167

# CERTIFICATE OF REGISTRATION

Document 1 Filed 06/01/00

For Supplementary Registration  
UNITED STATES COPYRIGHT OFFICE  
Page 86 of 100 PageID #: 86  
RET



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

Xu 909-344



TX TXU PA PAU VA VAU SR SRU RE

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

## REGISTER OF COPYRIGHTS STATE CONTINUATION SHEET.

United States of America

**A**

Title of Work ▼  
APU/AXM/MAKEFILE (v.1.9)

Registration Number of the Basic Registration ▼

TXu 909-304

Name(s) of Author(s) ▼

Alcatel USA, Inc.

Year of Basic Registration ▼

2000

Name(s) of Copyright Claimant(s) ▼

Alcatel USA, Inc.

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number 2; 4; 4 Line Heading or Description Name of author: Copyright claimant; Transfer

Incorrect Information as It Appears in Basic Registration ▼

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)

Corrected Information ▼

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction ▼

To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

MORE ON BACK ►

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

DO NOT WRITE HERE

Page 1 of 2 pages

FUND RECEIVED DAT

MAY 24 2006

EXAMINED BY

CORRESPONDENCE

REFERENCE TO THIS REGISTRATION ADDED TO

BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewall, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) 972 - 519-3735 Fax (972 ) 477-9328 Email

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification: I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)  
☐ other copyright claimant ☐ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s) ☒

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ☒ V. Lawrence Sewall Date ☒ 5/23/2006Handwritten signature (X) ☒Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ☒ V. Lawrence Sewall  
Alcatel USA, Inc.Number/Street/Box ☒  
1000 Coit RoadCity/State/ZIP ☒  
Plano, TX 75075• Complete all necessary spaces  
• Sign your application in Space 81. Application form  
2. Nonrefundable filing fee in check or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0001As of July 1,  
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February 2000-40,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-481-112/107

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00159-PNB Document 1 Filed 06/01/00 Page 88 of 100 PageID #: 88



This Certificate, issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

For Supplementary Registration  
UNITED STATES COPYRIGHT OFFICE  
Page 88 of 100 PageID #: 88

TXu 909-345



TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE
----	-----	----	-----	----	-----	----	-----	----

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

REGISTER OF COPYRIGHTS DATE CONTINUATION SHEET.

**A**

Title of Work ▼

**BUILD\_TOOLS/TARGETS.MK (V.1.22)**

Registration Number of the Basic Registration ▼

**TXu 909-305**

Year of Basic Registration ▼

**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2a; 4; 4**

Line Heading or Description **Name of author; Copyright claimant; Transfe**

Incorrect Information as It Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK ►**

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

**DO NOT WRITE HERE**

Page 1 of **7** pages



FORM CA RECEIVED

FORM CA

MAY 24 2000

FUNDS RECEIVED DATE

MAY 24 2000

EXAMINED BY

CORRESPONDENCE ☒REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) Fax (972) 477-9328 Email

972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author☐ owner of exclusive right(s)☐ other copyright claimant☒ duly authorized agent of

Alcatel USA Sourcing, L.P. by Alcatel USA

GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) ☒

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ☒ V. Lawrence Sewell Date ☒ 5/23/2000Handwritten signature (X) ☒Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ☒ V. Lawrence Sewell  
Alcatel USA, Inc.Number/Street/Apt ☒  
1000 Coit RoadCity/State/ZIP ☒  
Plano, TX 75075\* Complete all necessary spaces  
\* Sign your application in green ink1. Application form  
2. Non-refundable filing fee in check or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0000As of July 1,  
1998, the fee  
for filing Form  
CA is \$35.

\*17 U.S.C. § 508(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 408, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

February 2000—40,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-461-113/167



This Certificate issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*

For Supplementary Registration  
UNITED STATES COPYRIGHT OFFICE  
Page 99 of 100 PageID #: 90  
REGU  
TXu 909-346  
TX TXU PA PAU VA VAU SR SRU RE  
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION  
MAY 24 2000  
Month Day Year

A

REGISTER OF COPYRIGHTS  
United States of America  
Title of Work ▼  
BUILD\_TOOLS/MAKEFILE (V.1.26)  
Registration Number of the Basic Registration ▼  
TXu 909-306  
Year of Basic Registration ▼  
2000  
Name(s) of Author(s) ▼  
Alcatel USA, Inc.  
Name(s) of Copyright Claimant(s) ▼  
Alcatel USA, Inc.

B

Location and Nature of Incorrect Information in Basic Registration ▼  
Line Number 2e; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfer  
Incorrect Information as It Appears in Basic Registration ▼  
Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)  
Corrected Information ▼  
Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)  
Explanation of Correction ▼  
To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.

C

Location and Nature of Information in Basic Registration to be Amplified ▼  
Line Number Line Heading or Description  
Amplified Information and Explanation of Information ▼

FORM CA RECEIVED

FORM CA

FUNDS RECEIVED DAT

MAY 24 2000

EXAMINED BY

CORRESPONDENCE

REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075

Phone ( ) Fax (972) 477-9328 Email

972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

☐ author ☐ owner of exclusive right(s)  
☐ other copyright claimant ☐ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) A

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ V. Lawrence Sewell

Date ▼ 5/23/2000

Handwritten signature (X) ▼

Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name ▼ V. Lawrence Sewell  
Alcatel USA, Inc.Mailing Street/Box ▼  
1000 Coit RoadCity/State/ZIP ▼  
Plano, TX 75075\* Complete as necessary sections  
\* Sign your application in § 5000 P1. Applicable form  
I. Nonrefundable filing fee in cash or  
money order payable to Register of  
CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-0000As of July 1,  
1990, the fee  
for filing Form  
CA is \$45.

\*17 U.S.C. § 502(e): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 402, or in any written statement filed in connection with the application, shall be fined not more than \$2,500.

February 2000—40,000  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-401-112/107

# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00

UNITED STATES COPYRIGHT OFFICE  
Page 92 of 100 PageID #: 92



This Certificate is issued under the seal of the Copyright Office in accordance with title 17, United States Code, attests that registration has been made for the work identified below. The information on this certificate has been made a part of the Copyright Office records.

*Marybeth Peters*



TXU 909-347  
XXXXXXXXXXXXXX

EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION

MAY 24 2000

Month Day Year

REGISTER OF COPYRIGHTS

United States of America

A

Title of Work  
**BUILD\_TOOLS/DEFINES.MK (V.1.35)**

Registration Number of the Basic Registration

TXU 909-307

Year of Basic Registration

2000

Name(s) of Author(s)

Alcatel USA, Inc.

Name(s) of Copyright Claimant(s)

Alcatel USA, Inc.

B

Location and Nature of Incorrect Information in Basic Registration

Line Number 2a; 4; 4 Line Heading or Description Name of author; Copyright claimant; Transfer

Incorrect Information as it Appears in Basic Registration

Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)

Corrected Information

Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)

Explanation of Correction

To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.

C

Location and Nature of Information in Basic Registration to be Amplified

Line Number Line Heading or Description

Amplified Information and Explanation of Information

MORE ON BACK

- Complete all applicable spaces (D-G) on the reverse side of this page.
- See detailed instructions.
- Sign the form at Space F.

DO NOT WRITE HERE

Page 1 of 2 Pages

FUND RECEIVED DATE

MAY 24 2000

EXAMINED BY

CORRESPONDENCE

REFERENCE TO THIS REGISTRATION ADDED TO  
BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

DO NOT WRITE ABOVE THIS LINE. IF YOU NEED MORE SPACE, USE A SEPARATE CONTINUATION SHEET.

Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075Phone ( ) Fax (972) 477-9328 Email  
972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

☒ author☐ owner of exclusive right(s)☐ other copyright claimant☐ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) Δ

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name ▼ V. Lawrence Sewell

Date ▼ 5/23/2000

Handwritten signature (X) ▼

Certificate  
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address:Name ▼ V. Lawrence Sewell  
Alcatel USA, Inc.Number/Street/ Apt ▼  
1000 Coit RoadCity/State/ZIP ▼  
Plano, TX 75075\* Complete all necessary spaces  
\* Sign your application in Space F1. Application form  
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CopyrightsLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
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February 2000—40,000  
WEB REV. June 1999

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# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00

UNITED STATES COPYRIGHT OFFICE  
Page 94 of 100 PageID #: 94



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*Marybeth Peters*

TX	TXU	PA	PAU	VA	VAU	SR	SRU	RE
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION								
MAY 24 2000								
Month			Day			Year		

## REGISTER OF COPYRIGHTS CONTINUATION SHEET.

United States of America

**A**

Title of Work  
**BUILD\_TOOLS/RULES.MK (V.1.12)**

Registration Number of the Basic Registration  
**TXu 909-308**

Year of Basic Registration  
**2000**

Name(s) of Author(s)  
**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s)  
**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration

Line Number **2a; 4; 4** Line Heading or Description **Name of author; Copyright claimant; Transfer**

Incorrect Information as It Appears in Basic Registration

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information

**Alcatel Network Systems, Inc. (Author); Alcatel USA Sourcing, L.P. (Claimant); By transfer (Transfer)**

Explanation of Correction

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified

Line Number Line Heading or Description

Amplified Information and Explanation of Information

**MORE ON BACK**

- Complete all applicable spaces (D-G) on the reverse side of this page.
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Page 1 of 2 pages

FUND RECEIVED DATE

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REFERENCE TO THIS REGISTRATION ADDED TO

BASIC REGISTRATION ☒ YES ☐ NOFOR  
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USE  
ONLY

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Continuation of: ☐ Part B or ☐ Part C

Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewall, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075Phone ( ) Fax (972) 477-9328 Email  
972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification<sup>1</sup> I, the undersigned, hereby certify that I am the: (Check only one)☒ author ☐ owner of exclusive right(s)  
☐ other copyright claimant ☒ duly authorized agent ofAlcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General PartnerName of author or other copyright claimant, or owner of exclusive right(s)  $\Delta$ 

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name  $\nabla$  V. Lawrence Sewall Date  $\nabla$  5/23/2000Handwritten signature (X)  $\nabla$  *V. Lawrence Sewall*Certificate  
will be  
mailed in  
window  
envelope  
to this  
address:Name  $\nabla$  V. Lawrence Sewall  
Alcatel USA, Inc.Number/Street Apt  $\nabla$   
1000 Coit RoadCity/State/Zip  $\nabla$   
Plano, TX 75075• Complete all necessary spaces,  
• Sign your application in Space 71. Application fee  
2. Nonrefundable filing fee in check or  
money order payable to Register of  
CopyrightLibrary of Congress  
Copyright Office  
101 Independence Avenue, S.E.  
Washington, D.C. 20540-4001As of July 1,  
1999, the fee  
for filing Form  
CA is \$66.<sup>1</sup> 17 U.S.C. § 504(a): Any person who knowingly makes a false representation of a material fact in the application for copyright registration provided for by section 402, or in any written statement filed in connection with the application, shall be fined not more than \$2,000.February 2000—40,000  
WEB REV: June 1999

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# CERTIFICATE OF REGISTRATION

Case 4:00-cv-00199-PNB Document 1 Filed 06/01/00

UNITED STATES COPYRIGHT OFFICE  
Page 96 of 100 PageID #: 96



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*Marybeth Peters*

TX	TXU	PA	PAU	VA	VAU	SA	SAU	RE
EFFECTIVE DATE OF SUPPLEMENTARY REGISTRATION								
MAY 24 2000								
Month			Day			Year		

OFFICIAL SEAL  
REGISTER OF COPYRIGHTS  
UNITED STATES OF AMERICA  
CONTINUATION SHEET.

**A**

Title of Work ▼  
**BUILD\_TOOLS/WHIPSOURCE.PL (V.1.3)**

Registration Number of the Basic Registration ▼  
**TXu 909-309**

Year of Basic Registration ▼  
**2000**

Name(s) of Author(s) ▼

**Alcatel USA, Inc.**

Name(s) of Copyright Claimant(s) ▼

**Alcatel USA, Inc.**

**B**

Location and Nature of Incorrect Information in Basic Registration ▼

Line Number **2a; 4; 4** Line Heading or Description **Name of author; Copyright claimant; Transfer**

Incorrect Information as it Appears in Basic Registration ▼

**Alcatel USA, Inc. (Author); Alcatel USA, Inc. (Claimant)**

Corrected Information ▼

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Explanation of Correction ▼

**To reflect the correct Alcatel entities as author and claimant as of the time the application was filed.**

**C**

Location and Nature of Information in Basic Registration to be Amplified ▼

Line Number \_\_\_\_\_ Line Heading or Description \_\_\_\_\_

Amplified Information and Explanation of Information ▼

**MORE ON BACK ►**

• Complete all applicable spaces (D-G) on the reverse side of this page.  
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Page 1 of 2 pages



MAY 24 2000  
FUNDS RECEIVED DATE

MAY 24 2000

EXAMINED BY *h*CORRESPONDENCE ☒

REFERENCE TO THIS REGISTRATION ADDED TO

BASIC REGISTRATION ☒ YES ☐ NOFOR  
COPYRIGHT  
OFFICE  
USE  
ONLY

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Correspondence: Give name and address to which correspondence about this application should be sent.

V. Lawrence Sewell, Esq.  
Alcatel USA, Inc.  
1000 Coit Road  
Plano, TX 75075Phone ( ) Fax (972) 477-9328 Email  
972 - 519-3735

Deposit Account: If the registration fee is to be charged to a Deposit Account established in the Copyright Office, give name and number of Account.

Name

Account Number

Certification\* I, the undersigned, hereby certify that I am the: (Check only one)

- ☐
- author
- ☐
- owner of exclusive right(s)
- 
- ☐
- other copyright claimant
- ☒
- duly authorized agent of

Alcatel USA Sourcing, L.P. by Alcatel USA  
GP, Inc., General Partner

Name of author or other copyright claimant, or owner of exclusive right(s) A

of the work identified in this application and that the statements made by me in this application are correct to the best of my knowledge.

Typed or printed name V. Lawrence Sewell

Date 5/23/2000

Handwritten signature (X) *V. Lawrence Sewell*Certificate  
will be  
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window  
envelope  
to this  
address:Name V. Lawrence Sewell  
Alcatel USA, Inc.Number Street/Apt  
1000 Coit RoadCity/State/ZIP  
Plano, TX 75075

- \* Complete as necessary spaces
- 
- \* Sign your application in space F

1. Application form
- 
2. Nonrefundable filing fee in cash or
- 
- money order payable to Register of
- 
- Copyrights

Library or Congress  
Copyright Office  
101 Independence Avenue, S.E.  
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February 2000—40,800  
WEB REV: June 1999

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U.S. GOVERNMENT PRINTING OFFICE: 2000-461-112/107

MAR 29 '00 12:35 FR PR IJER ROSE LLP 212 969 2900 TO 5551 9692909 P.02/04  
 Mar-29-2000 11:23am From-LYNN.STODGHILL.MELSHEIMER&TILLOTSON T-890 P.002/004 F-589

## CAUSE NO. 99-06912

ALCATEL USA, INC.,	§	IN THE DISTRICT COURT OF
	§	
Plaintiff,	§	
	§	
v.	§	DALLAS COUNTY, TEXAS
	§	
MONTEREY NETWORKS, INC.,	§	
	§	
Defendant.	§	44 <sup>th</sup> JUDICIAL DISTRICT COURT

**ORDER GRANTING IN PART AND DENYING IN PART  
PLAINTIFF'S APPLICATION FOR TEMPORARY INJUNCTION**

CAME ON for hearing the application of Alcatel USA, Inc. ("Alcatel"), plaintiff, for a temporary injunction against Monterey Networks, Inc. ("Monterey"), defendant. The Court conducted an evidentiary hearing on October 19, 1999, and December 13, 14, 15, and 16, 1999. Alcatel and Monterey submitted post-hearing briefs on January 12, 1999. The Court heard argument regarding the application on February 22, 2000. Having considered the evidence, the pertinent authorities, and the arguments of counsel, the Court concludes that the application is meritorious in part and is not meritorious in part and therefore should be granted in part and denied in part.

The evidence before the Court establishes that Alcatel probably will suffer irreparable injury unless the Court issues a temporary injunction. The evidence indicates, in particular, that Marian Trnkus formerly worked as an independent contractor for Alcatel; that during the period in which he worked for Alcatel as an independent contractor Mr. Trnkus authored several generic software programs to assist him in performing work for Alcatel, including Whip, WhipSource, make/defines.mk, make/recurse.mk, make/rules.mk, and make/targets.mk; that some months after going to work for Monterey Mr. Trnkus began using derivatives of Whip (renaming it Genpat), WhipSource (renaming it Deppat), make/defines.mk, make/recurse.mk, make/rules.mk, and make/targets.mk at Monterey and persuaded others at Monterey to use them also; that these software

85

MAR 29 '00 12:35 FR PRO. JER ROSE LLP 212 969 2900 TO 55512 692909 P.03/04  
Mar-29-2000 11:24am From-LYNN,STODGHILL,WELSHMEIER&TILLOTSON T-880 P.003/004 F-588

programs are trade secrets of Alcatel; and that Alcatel will therefore probably suffer irreparable injury if Monterey does not cease using the software programs in that damages from such use may be difficult or impossible to calculate by any pecuniary standard.

The Court accordingly ORDERS as follows:

1. The Clerk of the Court shall issue a Temporary Injunction enjoining Monterey, its employees, its agents, its representatives, and all those who receive actual notice of the Temporary Injunction and are acting in concert with Monterey from:

- a. Using the Whip, WhipSource, Genpat, or Deppat software program and any other software program that is substantially similar to and derived from the Whip, WhipSource, Genpat, or Deppat software program.
- b. Using the make/defines.mk, make/recurse.mk, make/rules.mk, or make/targets.mk software program or any other software program that is substantially similar to and derived from any of them.

2. Within 14 days after the Temporary Injunction becomes effective, Monterey shall file with the Court and serve on counsel for Alcatel a report disclosing the measures Monterey has taken to comply with the Temporary Injunction.

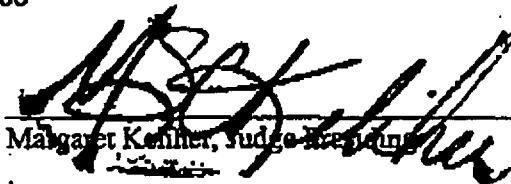
3. The Temporary Injunction shall not become effective unless and until Alcatel posts with the Clerk of the Court a bond in conformity with the law, or a cash deposit in lieu such a bond, in the amount of \$500,000.

4. All injunctive relief not expressly granted above is hereby DENIED.

MAR 29 '00 12:35 FR PRO. IER ROSE LLP 212 969 2900 TO 55512 692909 P.04/04  
Mar-29-2000 11:24am From-LYNN.STODGHILL,WELLSHEIMER&TILLOTSON -800 P.004/004 F-589

5. Trial of this case shall commence on February 5, 2000.

SIGNED this 21st day of March, 2000

  
Margaret Kenner, Judge Presiding

APPROVED AS TO FORM :



Barry C. Barnett

State Bar No. 01778700

Andrew W. Yung

State Bar No. 00794899

SUSMAN GODFREY L.L.P.

901 Main Street, Suite 4100

Dallas, Texas 75202

ATTORNEYS FOR MONTEREY  
NETWORKS, INC.